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THE UNIVERSITY OF ALBERTA

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by

(C)

GERTRUDE CECILIA NICKS

A THESIS

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ABSTRACT

Historical documents left by fur traders, missionaries, and government commissions, in combination with data obtained through field work, provide the basis for an analysis of some demographic attributes of western Canadian native populations at the community and regional levels for the nineteenth and twentieth centuries.

Fur trade records for northern Alberta between 1788 and 1850 are used to investigate the nature of migration and settlement patterns, social organization, mortality patterns, the rise of new populations through intermarriage between local and immigrant groups, and the effects of the introduction of the fur trade on native demography. In the latter half of the nineteenth century, government commissions enumerated the mixed-blood residents of western Canada, and from their records it has been possible to define the distribution of the population, and the patterns of migration for the married portion of the population. Church and government records, supplemented with interview data, are used to assess the utility of record linkage methods and to trace the origins, population growth, and patterns of migration and endogamy for the community of Grande Cache in west-central Alberta between 1800 and 1975.

Results of these historical, anthropological and demographic analyses demonstrate the potential for longitudinal study of non-literate band-level populations over the past two hundred years in western Canada. The value of such studies lies not only in the demographic description of band societies which they provide, but also in their power to identify the changes through time which have been made

as adaptations to the presence of an alien culture. The documentation of historical demographic patterns for band populations provides the information which is essential to the interpretation of results of genetic anthropological studies of contemporary descendants.

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CHAPTER I

INTRODUCTION

A central focus in the field of human biology is the study of the demography of primitive societies, in particular those which are hunting-gathering bands. Service (1964:111) defines a band as, "...only an association, more or less residential, of nuclear families, ordinarily numbering 30 - 100 people, with affinal ties loosely allying it with one or a few other bands." These finite populations are assumed to represent the mode of adaptation typical throughout most of human evolution, i.e. the paleolithic and early neolithic eras.

In reality, the recent history of most surviving primitive band populations has been marked by rapid change, even extinction, as a result of encroachment by societies which are more technologically advanced. Rather than serving as models for "Stone Age culture" they are best suited to studies in which the focus is on historical processes of adaptation to changing cultural and physical environments. A demographic anthropological approach to such studies provides the scope for investigation of the interrelationships between biological and cultural change.

Historical processes in primitive society are difficult to study since it is characteristically non-literate, and therefore, demographic records most often do not exist. Fieldwork in several areas of the world---South America, Africa, Oceania---has provided the beginnings of a demographic anthropology for primitive society, but the data usually lack time depth and largely preclude examination of demographic processes in the context of culture and history. Since most of these populations are now in marginal environments, their demographic stability and prospects for their survival are doubtful; consequently field surveys alone will not likely provide demographic information which is truly representative of, nor extensive enough, to determine the diversity of patterns of adaptation.

Additional approaches to the demographic study of primitive society would clearly be of value. One approach available is the use of historical records compiled by literate observers of these populations. From archival documents it is possible to extend the time depth of information on non-literate populations. The presence of literate observers, however, implies that a situation of contact between very different cultures exists. Therefore, the demographic patterns revealed by such sources may be adaptations to the literate culture as well as to a natural or physical environment. An historical perspective provides the opportunity to document and analyze the interaction between cultural, demographic and environmental change. Since historical records were usually kept for reasons other than demographic analysis per se, interpretations of the information which they contain must take into account biases which may be present in the documents.

The research to be presented focuses on western Canadian native populations which at earliest contact with Europeans were non-literate hunters, trappers and gatherers with a band level of social organization. Literate European observers, who included fur traders, explorers, missionaries, and government representatives, left records covering the transition of the native populations from hunting and trapping to a tenuous integration into modern urban and industrial society. While demographic information recovered from the available records is by no means complete, it does provide the basis to begin significant analysis of aspects of the demographic history of these small populations.

The research is presented as three interrelated studies in the demographic anthropology of a well-defined region in western Canada which together cover a period of almost 200 years from ca. 1800 to 1975. The first study is based on records created by fur traders in northwestern Alberta from about the beginning of the nineteenth century to 1850. It covers the earliest period of direct contact between Europeans and native populations in this area. The second study uses demographic information contained in applications made before the North West Half Breed scrip commission of 1885 to 1901. These applications represent Metis people from a wide area of Canada and the northern United States; but the major concentration is on populations resident in the areas of present-day Alberta, Saskatchewan and northern Manitoba. Finally, the third study combines information from fur trade, church, and government records with data obtained through fieldwork by the author to examine the demographic history of the native population resident on the eastern slopes of the Rocky Mountains in the area of Grande Cache, Alberta, from 1800 to 1975.

The first two studies are basically cross-sectional analyses of several populations, while the third provides a longitudinal perspective of the demographic history of a single native group. These approaches are combined in demographic-anthropological analysis.

Although the three studies differ somewhat in geographical area and only partially overlap in time, there is continuity with regard to the populations considered. The first study mainly discusses Athapaskan and Algonkian Indian bands, but it also documents the indigenous development of Metis populations in northwestern Alberta at the beginning of the nineteenth century. The second study includes the same Metis in the latter half of the nineteenth century, while the third study focuses on one of these populations from its founding to its present-day descendants. With the exception of some Metis populations included in the second study, the groups considered are residents of the sub-arctic or boreal forest zone. The second study also incorporates groups from the plains and parkland zones of western Canada.

By the time documentation begins for native peoples in the west their lifestyle was already much modified by the adoption of a fur trade subsistence pattern. Far from being disinterested observers, European fur traders, and after them missionaries and government officials, acted consciously or unconsciously as agents of change for native cultures. The study of the demographic history of native populations in western Canada is therefore, in large measure, a study of changes brought about by direct and indirect European influence.

Sources from which demographic information was obtained and the methods of analysis employed are described in detail in each study. The present discussion is limited to some comparisons of the sources consulted and the methods of analysis.

The fur trade records which form the basis of the first study only rarely provide detailed demographic information such as censuses or records of vital events for native populations. Although annual reports for trading districts were supposed to include a count of the number of Indians in the area this information was not always included, nor are all of these reports extant. More often demographic inference must be obtained from the scattered references to native groups contained in the daily journals kept by post masters. Much of this information does not easily lend itself to quantification, with the result that demographic patterns are described from rather general and qualitative perspectives. Still, it is possible to determine a good deal regarding population size and distribution, and patterns of migration, group association and mortality. Fur trade documents also provide information concerning historical and cultural factors which would affect demographic patterns.

In contrast, the two studies of Metis populations are based on reconstructions from quantitative data. The North West

Half Breed applications comprise an extensive sample of life history data which covers the majority of Metis peoples in Alberta, Saskatchewan and northern Manitoba. Demographic patterns for the Grande Cache population are based on vital events recorded in Roman Catholic parish registers, applications to obtain North West Half Breed scrip or to withdraw from Treaty, and field interviews. In contrast to the first study as well, information on native culture and historical events, which provide the context for interpretation of the analyses, is available from observers who viewed the native population from varying perspectives.

Data were organized and analyzed using manual sorting techniques in the first and third studies and using computer methods in the second study. The quasi-qualitative nature of information in the first study is not amenable to computer manipulation. The total data set for the second study includes over 12,000 individuals and could only be sorted and analyzed efficiently by computer. The much smaller sample of 928 individuals included in the third study was manageable for manual sorting; however, in retrospect, the use of a computer would have saved much frustrating recounting.

The present studies of native demographic anthropology have few precedents. Systematic use of fur trade records for the demographic study of subarctic populations is relatively recent. Outstanding among published studies are those by Arthur Ray (1974) for the Cree and Assiniboine in the eighteenth and nineteenth centuries and Charles Bishop (1974) for the northern Ojibwa in the nineteenth century. Other research involving North West Half Breed commission records to date has centered on questions of aboriginal title or unsettled scrip claims. This is the first use of the data for primarily demographic research. Demographic studies have been based on Indian Affairs records, but these cover Treaty Indian populations in the twentieth century (see for example, Piche 1973).[1] The life-style of Indian peoples by this time was so altered by the reserve system that results of these studies are not comparable to an analysis of nineteenth century Metis groups. The longitudinal study is the first demographic analysis of the Grande Cache native population, and there is no comparable study in terms of coverage and multiplicity of sources in the published literature for subarctic populations.

The major objectives of the integration of the three studies presented are: first, to examine the utility of the available data sources for demographic analysis; second, to identify patterns of population distribution, size and composition; and third, to describe changes in these patterns and identify related historical and cultural factors.

Chapter II comprises the study of Indian and Metis populations of northwestern Alberta in the first half of the nineteenth century from the perspective of fur trade records. The topics covered include migration and settlement patterns; band and family composition and size; sex distribution; mortality; and the founding of Metis bands.

Chapter III presents the analysis of the North West Half Breed scrip records. The discussion centers on population size, density, and distribution; the ethnic composition of Metis populations;

and patterns of migration and endogamy at first marriage. Some comparisons are made with the nineteenth century Treaty Indian population of western Canada. It should be noted that the potential of scrip records for demographic analysis has not been fully exploited in this study.

The longitudinal study of the Grande Cache population is presented in Chapter IV. Topics covered include the founding and continuity of this population; trends in population growth; sex distribution; and, for the subset of married individuals, patterns of migration and endogamy. A major concern in this study is the assessment of the utility of the available data sources in record linkage and of the compatibility of the data from the different sources in ascertaining demographic events in the native population.

Results of the three studies are summarized in a final chapter and compared with relevant demographic-anthropological research on subarctic native populations.

These studies represent an initial and exploratory investigation of the possibilities for empirical research into the demographic history of North American native populations. The data bases presently established are subject to further expansion and analysis. Additional enquiries into the cultural and historical factors determining the demographic patterns are possible as well. The results achieved at present demonstrate that sufficient information is available to carry out studies of historical processes of adaptation in primitive societies which will be of value both in developing regional histories and in more general discussions of human evolution.

CHAPTER II

EARLY CONTACTS IN NORTHWESTERN ALBERTA: THE FUR TRADE, 1788-1850

The introduction of the fur trade marked the earliest contact between native and European cultures in northern Alberta. The very earliest effects of the trade were indirect, but by the end of the eighteenth century fur traders and their forts were established in the area. Until about 1850, the fur trade represented the only major European influence on native cultures. This chapter examines the demographic effects which contact with the fur traders had on native populations on the Peace and Upper Athabasca Rivers, and the Lesser Slave Lake/Lac la Biche area during this initial cultural confrontation. The examination focuses on change and continuity in native migration and settlement patterns, social organization, and mortality patterns; and on the development of a new native subpopulation.

Materials and Methods

A substantial documentary record for northern Alberta begins with Alexander Mackenzie's arrival on the Athabasca River in 1787. From that date until the mid-nineteenth century the journals and records of fur traders constitute the major source of information on native populations for the area.[2] The documents of both North West Company and Hudson's Bay Company traders have been consulted; some are in published form, but most are contained in the archives of the Hudson's Bay Company in the Provincial Archives of Manitoba and at the Public Archives of Canada (on microfilm). A few unpublished journals are located in the Provincial Archives of Alberta and the Glenbow-Alberta Institute Archives. A list of the fur trade posts which existed in the area of study previous to 1850 is presented as Table 1. Those posts for which documents are extant are underlined.

The methods employed to analyze these documents were more tedious than elegant. Because travel was necessary to consult most of the documents, an attempt was made to collect all information available on native populations in the records and so avoid repeated trips. Later these data were sorted into the categories selected for detailed study. The degree of refinement possible in regard to the demographic questions considered became evident as the strengths and weaknesses of the data base were revealed during the sorting process. In general, the data are of a qualitative rather than a quantitative nature, and the analyses reflect this bias in the data base. The limited quantitative data available is used to augment and support arguments made on the basis of the qualitative data.

1. Migration Patterns. The most obvious effect of European activity on native populations was population migration and displacement. Well before European posts were established in northern Alberta native groups from the east had begun to move into the area, displacing local groups as they advanced. The encroaching Indians, mainly Cree and some Assiniboine, were part of a westward expansion of the middleman trade zone in the eighteenth century (Ray 1974; Heindenereich and Ray 1976). This expansion occurred as a response

Table 1: Fur trade posts in the Peace and Athabasca River basins before 1850.

Records exist for all or part of the period of occupancy for those posts which are underlined.

The post indicated ?* in the Smoky River neighbourhood is referred to in HBA: B.115/e/3, B.115/a/5, B.115/a/6 and B.56/a/1.

Neighbourhood	Post	Company	Dates	Map Reference
Lower Peace River	Boyer's Post	NWCo.	1788- 1791	A
	Fort du Tremble	NWCo.	1792- 1799	B
	Grand Marais	NWCo.	1798-c1803	C
	Wentzel's Post	NWCo.	1799-c1803	D
	Ft. Vermilion I	NWCo./HBCo.	1799- 1821-31	E
	Fort Liard	NWCo.	1802- 1804	A
	Mansfield House	HBCo.	1802- 1803	A
	John's House	NWCo.	1818- 1819	F
	Colvile House	HBCo.	1818- 1821	G
	Ft. Vermilion II	HBCo.	1831	A
Upper Peace River	McLeod's Fort	NWCo.	c1790- 1792	H
	Fort Fork	NWCo.	1792- 1805	J
	Horseshoe House	NWCo.	1803- 1805	K
	Fort Fork	XYCo.	1803- 1805	J
	Ft. Dunvegan	NWCo.	1805- 1821	L
	Encampment Island	NWCo.	c1806- 1808	M
	Colin Campbell House	NWCo.	1812- 1813 or 1820- 1821	J
	St. Mary's House I	HBCo.	1818- 1819	J
	St. Mary's House II	HBCo.	1819- 1820	J
	St. Mary's House III	HBCo.	1820- 1821	J
	Ft. Dunvegan	HBCo.	1821- 1918	L
Smoky River and Upper Athabasca	Henry House	NWCo.	1811- 1821	N
	Jasper House I	NWCo.	1813- 1821	P
	?*	HBCo.	1821- 1822	R
	Jasper House I	HBCo.	1821- 1829	P
	Henry House	HBCo.	1821-c1825	P
	Fort Assiniboine	HBCo.	1824- 1870's	S
	Jasper House II	HBCo.	1829- 1890	P
Lesser Slave Lake/ Lac la Biche	Lac la Biche House	NWCo.	1798- ?	U
	Lesser Slave Lake posts	NWCo.	c1799- 1821	X
	Greenwich House	HBCo.	1799- 1800	U
	Fort Waterloo	HBCo.	1818- 1821	X
	Lesser Slave Lake	HBCo.	1821- ?	X

to the development of inland posts, first by the government of New France in the period 1732-1756, then by independent Montreal traders after 1763, and finally by the Hudson's Bay Company after 1774. The Cree and Assiniboine traded directly with the European companies, and therefore they had control of the access to the weapons which provided them with the advantage in strength required to displace indigenous groups.

Cree had displaced the Beaver tribe from the Athabasca River basin before 1760 (Jenness 1932:383). The Beaver retreated to the valley of the Peace, but Cree encroachment continued. By the 1790's the Beaver of the Lower Peace had, according to Alexander Mackenzie, adopted to a great extent the culture of the encroaching Cree, including their language, manner of dress and ornamentation, and their fondness for liquor and tobacco (Lamb 1970:253).

In response to pressure from the Cree, Beaver Indians pushed further westward up the Peace River; and they in turn displaced the Sekani, or Rocky Mountain Indians. The latter group claimed to Mackenzie in 1793 that their traditional home had always been around Fort Fork, upstream from the confluence of the Peace and Smoky Rivers. They were, they claimed, the only "real natives of that country" (Lamb 1970:250).

Peter Fidler, in charge at Greenwich House on Lac la Biche in 1779-1800, recorded that Beaver Indians had previously resorted to the northwest borders of Lesser Slave Lake, but by his time they were trading at the Canadian settlements on the Peace (HBA:B.104/a/1). Well before 1800 Lesser Slave Lake was, according to Burpee (1908:447), a way station where Cree Indians left their canoes when on war excursions from the Saskatchewan to the Peace River country. By the 1820's the North West Company had brought Cree Indians to hunt about Lesser Slave Lake from the area of Green Lake (in present-day Saskatchewan) and the Saskatchewan plains (HBA:B115/e/1).

At the beginning of the nineteenth century the Upper Athabasca was the hunting ground of "Swampy Ground Stone Indians". A sketch map drawn by a Bungee (Ojibwa) Indian in 1809 places the Assiniboine near the eastern edge of the "Stony Mountain" between the Summerberry (Pembina) River and an unnamed tributary (the McLeod) of the "Athapascow" River (see Map 2; HBA:E.3/4 F15). The Assiniboine had probably not been on the Athabasca much earlier than 1800. In the 1790's they were as far west on the North Saskatchewan River as the Fort Saskatchewan-Edmonton area (Lamb 1970:116); and the Bungee chief who drew the 1809 map indicated that the former country of the Swampy Ground Stone Indians was much further to the east, roughly in the area north of present-day Prince Albert, Saskatchewan.

In addition to Cree and Assiniboine immigration, there were other, smaller migrations of eastern Indians into the Peace and Athabasca drainage areas in the first half of the nineteenth century. Among these were various Ojibwa groups (Saulteaux, Courteoreille, Bungee, Nipissing) and Iroquois Indians. Many members of the latter group came as employees of the Montreal-based North West and XY fur companies. The majority of those under contract to fur companies returned to their eastern homelands and families and after one or a few contracts (Nicks 1980).

Some of the Saulteaux, along with Iroquois and French Canadian ex-employees who remained in the west, initiated a subpopulation parallel in lifestyle and linked by affinal ties to the majority Indian populations of northern Alberta. This subpopulation was subsequently known as the Metis.

Population displacement in northern Alberta began well in advance of a sustained, or even direct, presence of Europeans in the area. The Indian newcomers were, in one way or another, very much a part of a fur trade economic system. The largest newly arrived groups, Cree and Assiniboine, had made their adaptations to the fur trade in the eighteenth century as middlemen (Ray 1974; Heidenereich and Ray 1976). Even the older residents of the area, Beaver and Sekani, had experience in the barter of pelts to them in exchange for used European goods. Thus the first traders to arrive on the Athabasca and the Peace Rivers, and at Lesser Slave Lake/Lac la Biche met a native population already adapted, in some measure at least, to a fur trapping mode of subsistence. Later long range migrants, like the Iroquois and Ojibwa, came out of the St. Lawrence trading system which was as old as the founding of New France.

2. Settlement patterns and neighbourhoods. By the early nineteenth century, the native populations of the area had stabilized. Using fur trade records it has been possible to define the settlement patterns for the first half of the nineteenth century.

The data for this analysis came primarily from daily post journals and annual reports on districts. Each reference pinpointing an area being utilized by Indians trading at a given post was noted. These areas were then plotted on a map of the Peace and Athabasca basins to build a composite picture of land utilization. Care was taken to identify the outer limits frequented by natives who traded at a post on a regular basis. (Instances such as Indians travelling between posts on errands for a company were not counted).

When pinpointing individual localities one is actually documenting the activities of small groups which the fur traders called bands, but which in anthropological literature have been referred to as local bands (Helm 1969:214). A characteristic of local bands in hunting, trapping, and gathering societies is seasonal alteration in location and in membership to achieve an enhanced efficiency in relating the population to available resources. The composite picture derived from observations of the movements of these local bands represents the larger area utilized by regional or macro-bands (McKennan 1969:105). The membership of a regional or macro-band in fact might never aggregate into a single unit, and is therefore usually only identifiable through the network of interactions between constituent members as they move back and forth between local bands.

Given the nature of the data available in fur trade documents this interpretation has been found to be the only way of approaching a definition of the settlement pattern of the native population. According to Helm (1969:213)

> ...the directives underlying settlement patterns are based on the exploitative pattern, the exploitative pattern being

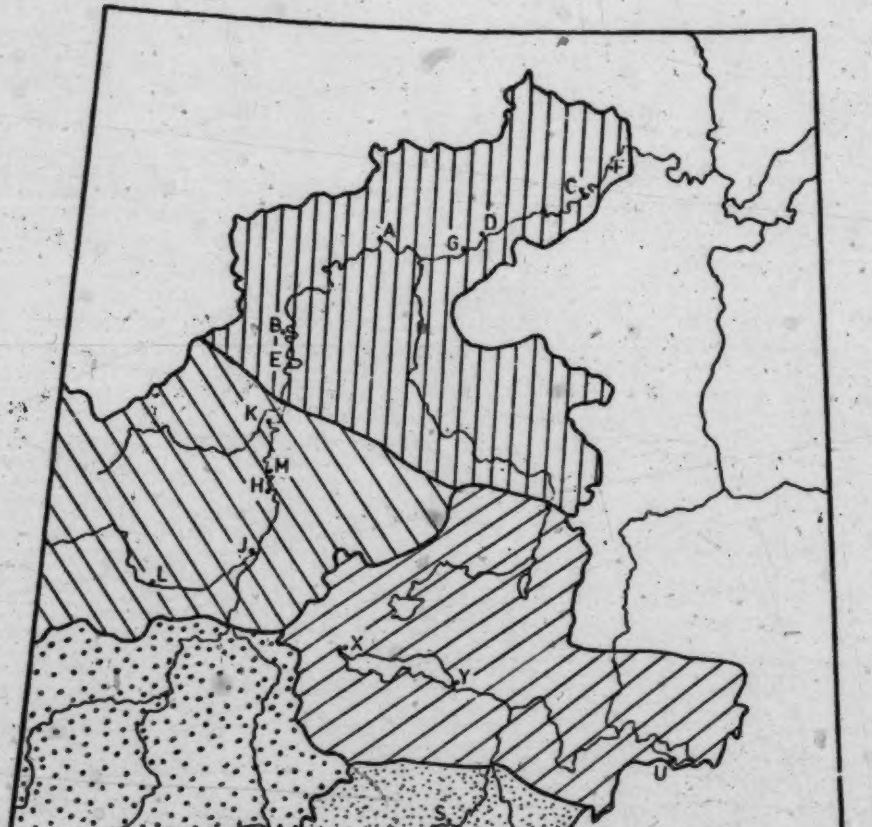
> the total set of activities in the acquisition of life's goods through the application of technology upon environment.

The present analysis assumes, then, that by isolating areas apparently being consistently exploited by a network of local bands it is possible to identify the settlement pattern appropriate to the larger network of relationships represented by the associations between these bands. The areas so identified in the present analysis are referred to as neighbourhoods as they represent regions over which segments of the native population were in close, if irregular, interaction.

Map 1 illustrates the five neighbourhoods identified through the analysis of local band movements. A word of explanation concerning the outlines of the neighbourhoods is required. The nature of the data available indicated that the neighbourhoods be defined in terms of the rivers, streams, and lakes that represented the important transportation routes, habitats of fur-bearing animals, and fisheries which were of major economic importance at the time. Although native peoples no doubt sometimes utilized areas "inland" from these core waterways, it is almost impossible to trace precisely where they might have travelled. For this reason, watershed boundaries have been arbitrarily chosen to represent the inland limits for the neighbourhoods.

Lower Peace River

This neighbourhood extends from the entry of the Notikewin River downstream to Peace Point near the mouth of the Peace River. The native population of the area in the first half of the nine-



Map 1: Neighbourhoods in northwestern Alberta, pre-1850.

Table 2: Census of Beaver Indians on lower Peace River, 1826.
(HBA: B.224/e/l)

Men	Young men	Women	Young women	Boys	Girls	Widows & orphans	TOTAL
47*	12	53	5	58	46	W = 10 M = 11 F = 5	247

* all except four are heads of families.

W = widows M = male orphans F = female orphans teenth century consisted mainly of Beaver Indians. Occasionally Chipewyan from Lake Athabasca ventured into the Peace River valley, and in 1826-1827 a band was sent to hunt at Hay River by the Hudson's Bay Company (HBA:B224/e/1). Some Iroquois and Canadian free trappers frequented the area after 1800 (HBA:B.41/a/1).

Estimates of native population size for the area at the beginning of the contact period are limited. The population frequenting Fort du Tremble in the early 1790's was reported to be 300 people of whom 60 were hunters. This population was divided into three bands with chiefs. One of these bands consisted of the chief and fifteen men (Lamb 1970:240). Thomas Swain, master at Mansfield House in 1802-1803, reported that the Beaver Indian tribe amounted to no more than 200 men between the ages of fifteen to seventy years from the entrance of the Peace to the Rocky Mountains (i.e. including those in both lower and upper Peace neighbourhoods) (HBA:B.41/a/1). The Hudson's Bay Company had only recently begun to trade in the area, and Swain was less familiar with the native population than his North West Company rivals. His low estimate is therefore questionable. A complete census exists for the lower Peace in 1826--a period when the Hudson's Bay Company enjoyed a monopoly of the trade. Table 2 presents a summary of the information from the 1826 census.

Upper Peace River

The upper Peace River neighbourhood is defined as extending westward (upriver) from the Notikewin River to approximately the Fort St. John area. It is roughly equivalent to the hinterland of

Fort Dunvegan, the longest occupied post in the area. The Notikewin River was the greatest distance downstream which Indians trading at Fort Dunvegan regularly travelled. In 1826, when Fort Dunvegan was closed, "Upper Peace River" Indians took their furs and provisions only as far as this river; and the Fort Vermilion post master was obliged to send men with goods to trade with them (HBA:B.224/e/1).

This neighbourhood was inhabited mainly by Beaver and Sekani Indians. In 1793 Mackenzie noted that the Beaver, unlike the Sekani, had adopted some Cree manners and customs, although not to the same extent as their counterparts on the lower Peace (Lamb 1970:240). It becomes difficult to separate Sekani from Beaver Indians in later fur trade records. Post masters varied in identifying a given individual as a member of one or the other tribe, and intermarriage was occurring between the two groups. The 1826 census lumps members of both Beaver and Sekani tribes as "Upper Peace River Indians".

In 1808 Daniel Harmon, North West Company trader at Dunvegan, reported Iroquois hunters as well as Beaver Indians waiting at the post for the fall canoes to arrive (Lamb 1957:118). The Iroquois mentioned were most likely from the Smoky River/ Jasper House neighbourhood; and stayed only briefly for supplies, there being no post in their area.

In 1835 and 1836, respectively, large bands of Assiniboine and Cree visited Dunvegan; to the consternation of the traders, as the Beaver Indians, fearful of attack, were unwilling to make hunts. Free trappers---Ojibwa (Saulteaux), Iroquois, Canadians, and Metis---were present, and represented about ten percent of the traders at Fort Dunvegan in the 1820's and 1830's. Small parties of Slave Indians traded at Dunvegan in the 1840's.

Population figures for the beginning of the contact period are all but lacking. Mackenzie reported in 1793 that there were approximately 100 Beaver men and 50 Sekani men capable of bearing arms "in the river" (Lamb 1970:253). Thirty-two men under two chiefs were reported to be trading at Horseshoe House, a North West Company post, in 1803 (Dempsey 1966:16). More complete census data exists for the area in the 1820's and 1830's (see Table 3).

Smoky River/Jasper House

This neighbourhood encompasses the Smoky River from its juncture with the Little Smoky River to its headwaters in the mountains, south to the area about Jasper House on the Upper Athabasca River. Iroquois were early residents of the neighbourhood. They were reported to be hunting furs on the "Smoke" River by 1803 (Dempsey 1966:19). By the 1820's Metis and a few Canadian free trappers appear to have hunted in the area also.

The population in this neighbourhood does not appear to have been large. Fort St. Mary's journal for October 27, 1819, refers to "a small band of free Iroquois, who are in the habit of killing a large quantity of furs" towards the foot of the Rocky Mountains (HBA:B.190/a/2). The Dunvegan post journals for 1824-1825 confirm that at least the part of this neighbourhood which was near the mountains was thinly inhabited due to the difficulty

Table 3: Census of Beaver and Sekani Indians on upper Peace River (HBA: B.224/e/1; HBA: B.56/a/1; PAA:74.1)

Year	Men	Young men	Women	Boys	Girls	Widows & orphans	TOTAL
1826	62	13	67	66	46	W = 16 M = 16 F = 15	301*
1828	48	19	90	75	66		298**
1830	51	20	104	118	95		388
1833	101		130	Children = 285 Infants = 10			526
1835	70	25	83	85	89	W = 26 M = 26 F = 20	424
1836	76	10	114	120	112	W = 25 M= 28 F= 20	505
1837	75	10	116	125	120		446
1838	73		105	113	95		386

* Families of seven men are not accounted for, therefore, numbers of women and children are underestimated.

** Forty natives from the Fort Vermilion area were on the upper Peace this year.

of maintaining subsistence at any season other than summer.

A small trading post was established on the Smoky for the 1821-1822 season to the great satisfaction of local trappers. However, traders at the Peace River posts successfully complained that the Smoky River establishment robbed them of a large part of their fur returns and so it was not re-opened.

As many as four local bands of Assiniboine hunters from the neighbouring upper Athabasca region hunted in the Jasper House area in the late 1820's. Shuswap from the west end of the Yellowhead Pass were occasional visitors at Jasper House, where they came to trade furs and obtain supplies. Free trappers from the Smoky River/Jasper House neighbourhood also spent some hunting seasons across the mountains.

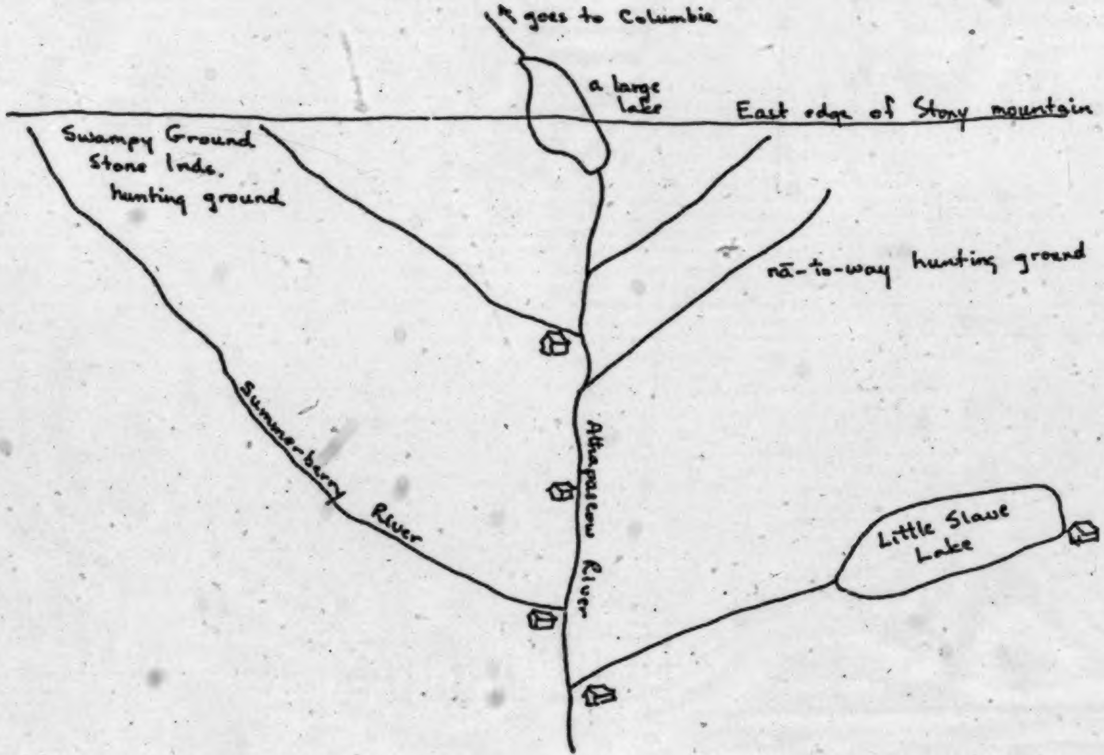
The fur trade records do not provide a census for any period for this neighbourhood; and estimates based on post journals, which record only those coming to the fort, are probably low. In the 1820's the largest number of trappers coming into Jasper House was 23, and in one season (1822-1823) 13 of these were hunting across the mountains. In 1838 Fathers Blanchet and Demers visited Jasper House and baptised twenty-eight children belonging to sixteen native nuclear families (Warner and Munnick 1972). The priests stayed at Jasper House only a few days, from September 26 to October 3; and undoubtedly failed to meet all of the people living in the neighbourhood. Therefore, these figures too must represent an underestimate of the actual population.

Upper Athabasca River

This neighbourhood encompasses the Athabasca River above Lesser Slave Lake and its tributaries the Pembina and McLeod rivers. During the period under discussion this region was primarily the home of Assiniboine Indians who had moved in from the southeast, probably just before the end of the eighteenth century. According to Ray (1974:98) their ancestors were probably in the vanguard of the westward-moving Woodland Assiniboine in the early eighteenth century. The map prepared for Peter Fidler by Chynky es un, a Bungee chief, shows the "Swamp Ground Stone Indians" against the eastern edge of the mountains (Map 2); but references in post journals indicate they utilized an area extending virtually to Lesser Slave Lake.

Woods Cree were also hunting in the neighbourhood of the Upper Athabasca River according to the Edmonton District Report for 1823 (HBA:B.60/e/5). They were outnumbered by the Assiniboine by a ratio of three to one.

Only fragmentary population figures can be found for this neighbourhood. In the 1790's Mackenzie reported that there were about 200 Woods Assiniboine to the west of Fort George and Fort Augustus (which were on the North Saskatchewan River) (Lamb 1970:16). In 1823 the population on the McLeod River totalled 80 men, viz., 60 Strongwood Assiniboine and 20 Strongwood Cree. The former were divided into 60 tents, the latter into 10 tents (HBA:B.60/e/5). In 1835, 30 Assiniboine men and their families travelled from Fort Assiniboine to visit the Beaver Indians at Dunvegan (HBA:B.56/a/4).



Map 2: Upper Athabasca River, after a sketch by Chynky es un, Bungee chief, 1809. (HBA: E.3/4 f.15).

Lesser Slave Lake/Lac la Biche

This neighbourhood extended from the area about the west end of Lesser Slave Lake to as far north as Whitefish Lake (now called Utikima Lake) and Wabasca Lake, and as far east as Lac la Biche. Generally native populations within this neighbourhood remained within a distance of from three to six or eight days out from the posts, which were at the west end of the lake for most of the period up to 1850 (Baergan 1967:15).

In the first half of the nineteenth century the neighbourhood was populated mainly by Crees who had been brought in from the Green Lake area and the Saskatchewan plains by the North West Company (HBA:B.115/e/1). There was intermittent contact between the Cree around Lesser Slave Lake and those from the east and south. There were also occasional war parties on the plains in which the Lesser Slave Lake Cree joined other Cree from the south.

Before 1800 Beaver Indians are reported to have frequented the northwest borders of Lesser Slave Lake (HBA:B.104/a/1), and even after that date occasional forays by Beaver bands to Lesser Slave Lake are recorded (for example, in 1803 and 1822). They were discouraged from staying in the area by the local post masters. For their part, Lesser Slave Lake Cree sometimes travelled to the Peace to visit with the Beaver on both friendly (1836) and warlike (1819) occasions.

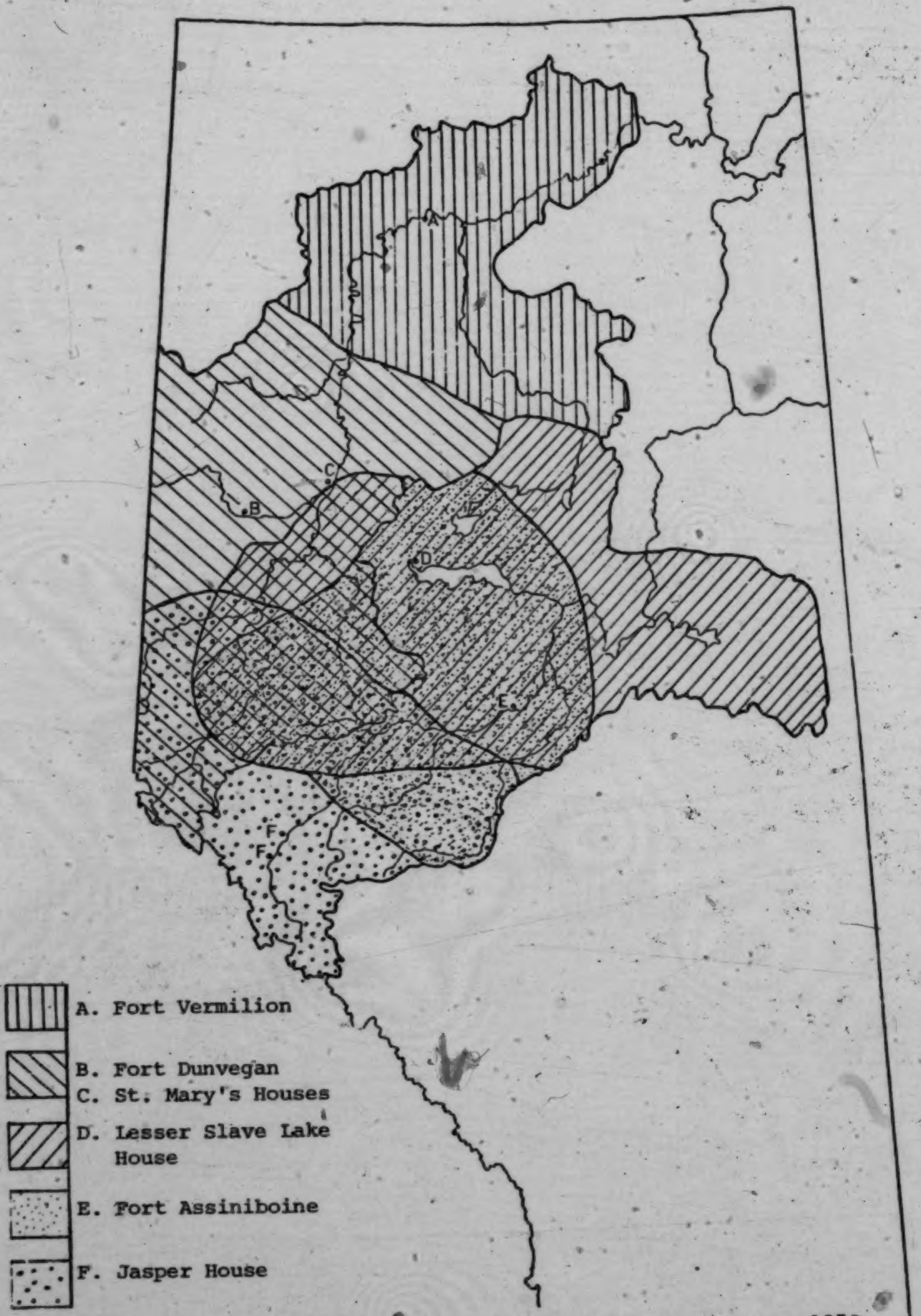
There was also a relatively large population of free trappers in the neighbourhood which was centered around Whitefish Lake and in the Lac la Biche area. A small number of Ojibwa

(Ottawa and Bungees) were in the area of Lac la Biche and the east end of Lesser Slave Lake as early as 1799-1800 (HBA:B.104/a/1).

Again, population figures for this neighbourhood are fragmentary. In 1799-1800 thirteen Ottawa and five Bungee men able to hunt are reported by Fidler about Lac la Biche and on the Lesser Slave Lake (HBA:B.104/a/1). In 1802-1803, 300 Cree Indian men able to hunt are reported at Lesser Slave Lake (HBA:B.41/a/1). Other population estimates for the district are indicated in Table 4.

The five neighbourhoods which have been defined are, of course, generalizations over the roughly sixty years under consideration. The fact that they have been defined on the basis of information from several sets of fur trade records is reason for confidence in their general outlines. The overlap in the records from various posts is illustrated on Map 3, in which the hinterlands about each post have been drawn in terms of the areas exploited by native groups trading at each post. The overlap mainly reflects the fact that the posts were not contemporaneous for the most part, as a glance at their dates of occupancy on Table 1 will illustrate. Except where rival companies were involved, contemporaneous posts did not usually compete for the trade of the same native population. The overlapping of hinterlands therefore provides useful complementary data--as well as extending the time frame for analysis, it makes possible cross-checks on interpretations.

The neighbourhoods which have been defined fall into three

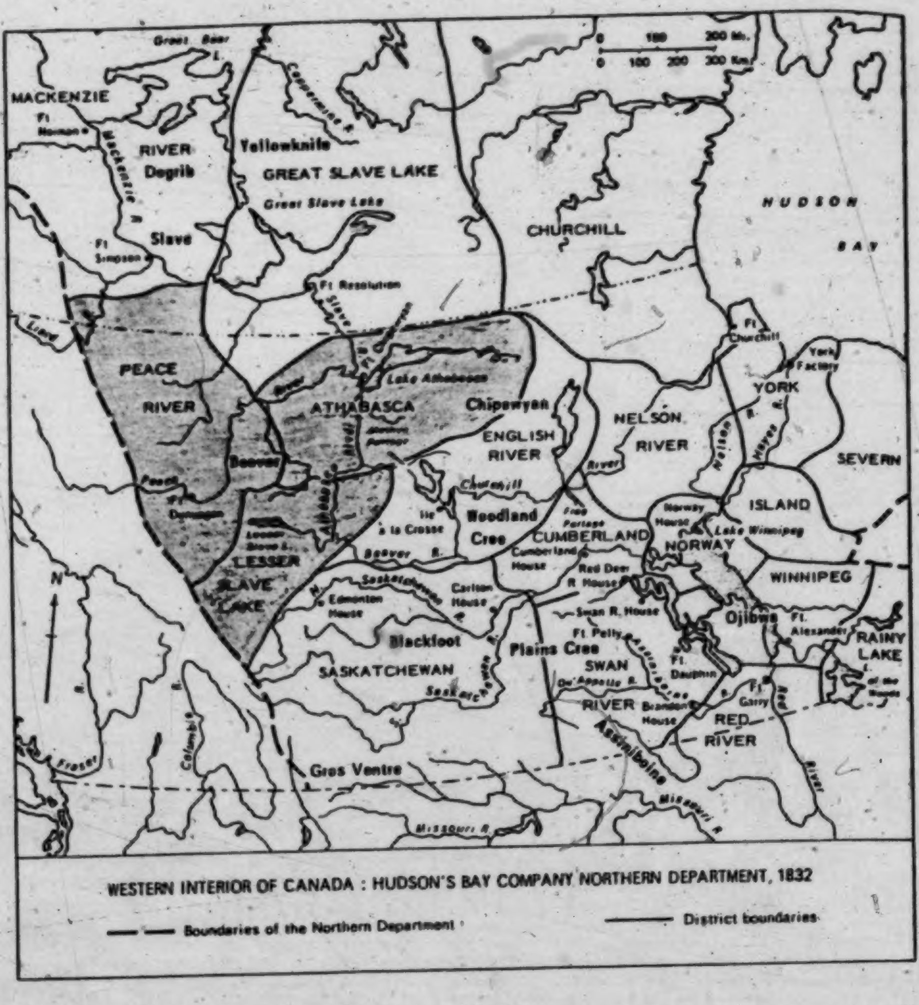


Map 3: Posts and hinterlands in northwestern Alberta, pre-1850.

Table 4: Cree Indian population for Lesser Slave Lake neighbourhood.

Year	Men	Women	Subadult	TOTAL
1802-03				300
1819-20	43	54	102	199
1821-22	30*			
1922-23	46*			164

*able to hunt



Map 4: Trading Districts of the Hudson's Bay Company, 1832
(after Ray 1976:140).

Districts referred to in text indicated by shading.

contact among native populations in northern Alberta before 1850, the traders could and did invoke economic sanctions in attempts to control where natives travelled.

One way of accomplishing this objective was to refuse to supply unwanted migrants with indispensible European goods. Post master Connelly at Lesser Slave Lake in 1822 threw out visiting Beaver Indians without even the common courtesy of providing them with a gift of tobacco, promising them no encouragement whatsoever to hunt and trade in the area. He furthermore scolded local Cree who had associated with the Beaver (HBA:B.115/a/6). Likewise Cree who visited Dunvegan in 1836 were turned away and sent to Lesser Slave Lake "where they will be supplied with their wants according to orders from Mr. C. Factor Rowand" (HBA:B.56/a/5). The stated motives of the traders in enforcing these separations were to prevent hostile interactions and to avoid over-populating a particular region relative to the available fur harvest.

Population and neighbourhood boundaries thus appear to have remained permeable in spite of the traders' efforts. Before union in 1821 the competition between the Hudson's Bay Company and one or more Montreal companies worked to the natives' advantage. To be quite certain that hunts owed them could be turned in the companies sent men to trade or live with Indians to whom they had given supplies on credit. Except for the rare times when rival companies cooperated in not buying furs from trappers who had been outfitted by someone else, the Indians could be fairly free to go to whichever post they chose.

of the official trading districts of the Hudson's Bay Company Northern Department; viz. the Peace River, Athabasca, and Lesser Slave Lake districts (see Map 4). The trading districts were established with a view towards most economically reaching the population of native trappers in the northwest. A comparison of the districts with the neighbourhoods just described shows that the former were designed to serve more than one regional band--for example, the Athabasca District served the Chipewyan of Lake Athabasca and the Beaver Indians of the lower Peace River; and Lesser Slave Lake District served Cree, Assiniboine, and free trappers from neighbourhoods 3, 4, and 5. To some extent a system of posts and outposts was established within a District to accommodate the different native populations. However, the trading Districts are too large to reflect the settlement pattern of regional bands; in fact, the way native populations utilized the land and resources defied the District boundaries. For example, well past 1850, trappers from the Smoky River/Jasper House neighbourhood travelled between the Peace and Upper Athabasca Rivers and traded as they pleased at posts in different Districts.

The traders did attempt to control the movements of native populations for the benefit of the fur trade. Their reasons for doing so included the need to ensure that fall outfits supplied on credit would be paid for at the appropriate company and/or post, and the necessity to prevent inter-tribal hostilities which not only threatened the traders' safety, but also took time and manpower away from fur trapping. Although there was not sufficient European manpower to dictate patterns of movement and

Social and antagonistic encounters between natives in different neighbourhoods continued after 1821, although they were usually of short duration. For example, two Cree lads from Green Lake in Saskatchewan visited relations at Lesser Slave Lake for the winter of 1822-23. Nor was more permanent movement unknown. The Fort Assiniboine and Lesser Slave Lake journals for 1831 relate the story of Fere Cassee who, having lost his mother and child in the upper Athabasca neighbourhood the previous winter, gave away his possessions and moved to the Lesser Slave Lake region. Moving away from an area where deaths had occurred was, according to the Lesser Slave Lake post master, "well known to be a common practice with the Indians..." (HBA:B.8/a/1 and HBA:B.115/a/9).

A very significant influence of the traders on the native settlement pattern was the establishment of new neighbourhoods. If there was an advantage to be gained in fur returns the traders promoted establishment of hunters, usually free Canadians, Ojibwa, or Iroquois, in otherwise underutilized regions. The Smoky River/ Jasper House neighbourhood represented a region which was early occupied by immigrant fur-trapping specialists because of its rich fur resources and in spite of the difficulties encountered in finding an adequate food supply other than in the summer. In 1823, attempts were made to get Lesser Slave Lake free trappers to hunt on the Athabasca above McLeod's branch, both to exploit an untapped area and to relieve the strain of overtrapping in the Lesser Slave Lake neighbourhood.

The specific inhabitants of neighbourhoods had begun to change even in the era of indirect trade with the arrival of new groups and the displacement of indigenous ones. The Cree, for example, occupied areas which prehistorically might be expected to be the home of Beaver Indians.

Within the period of direct trade there were changes in the organization of the fur trade itself which influenced the native settlement pattern. During periods of competition between fur companies there appears to have been a tendency for native groups to "hang around" the posts for extended periods (Parker 1967:188-189). Credits and gifts were easily obtained from the rival companies whether hunts were large or small, or even whether or not debts were always paid. When one Company monopolized the trade, particularly after 1821, native groups were discouraged from overstaying at the posts by the withdrawal of easy bounty from the traders.

3. Social Organization. The influence of the fur trade on the social organization of native groups during the early contact period is difficult to assess in the absence of information on prehistoric patterns. Although a new economic factor existed there was still the seasonal and spatial variability of the subsistence base, which dictated that the population function as units which were flexible in size and membership. Trapping for furs was to a degree compatible with such a pattern; but when the greatest effort was directed to obtaining furs, especially in areas where game was limited, a new source of stress and hardship appeared.

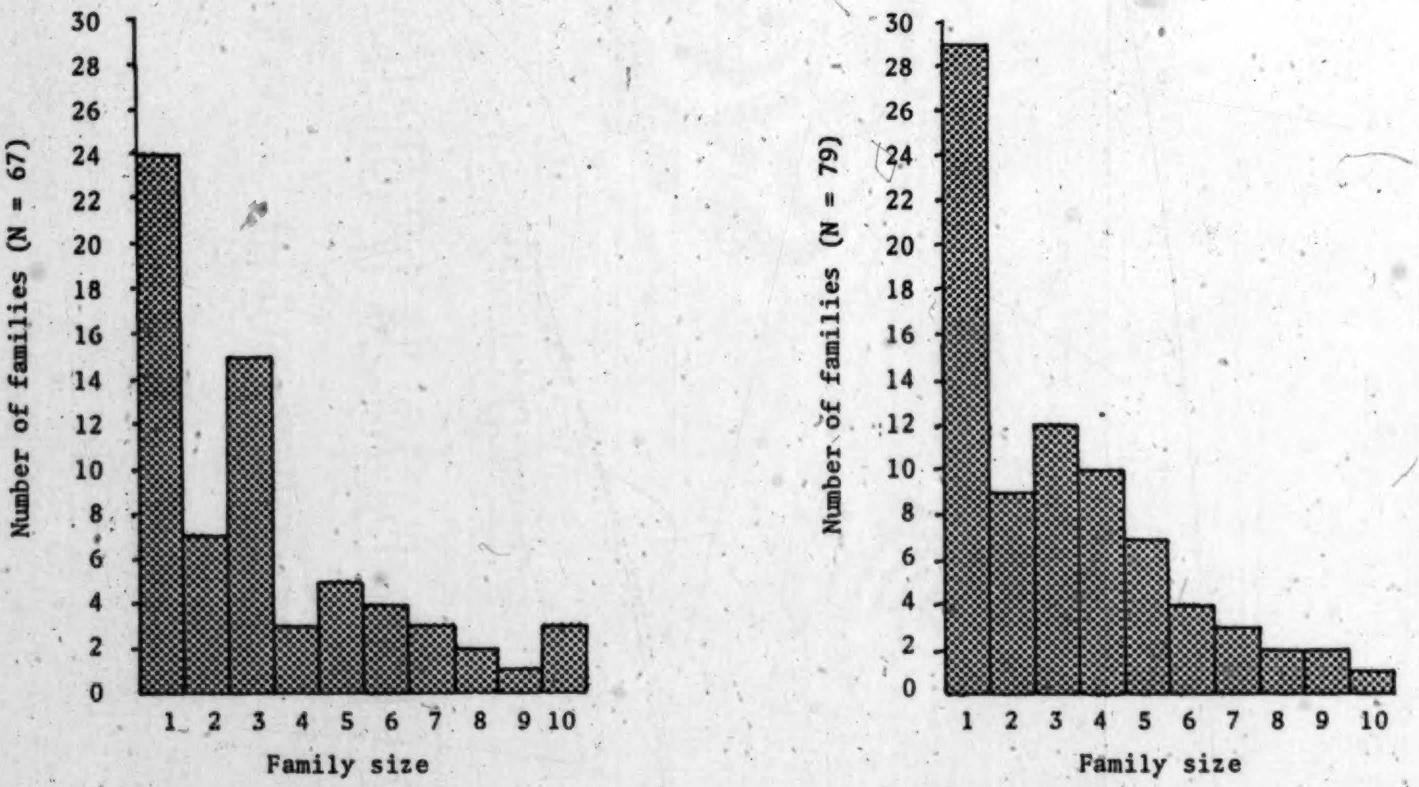
The sizes of social units can be roughly estimated from documents in spite of the fact that most often the traders noted only the numbers of able-bodied hunters in the local bands which came to trade at the forts. A survey of post journals gave the ranges in numbers of hunters shown in Table 5.

In the census of Indians on the Peace River for 1826 the greatest number of hunters in a nuclear family is three; therefore the local band sizes shown in Table 5 suggest two or more nuclear families were most often involved. Since most of the figures recorded for groups coming in with hunts or to be outfitted, the data may best reflect the sizes of bands which would gather with their trading captain (especially for trading and/or obtaining supplies) rather than the sizes of the trapping groups.

Other members of the native population---women, the very old, and the very young---were seldom enumerated by the traders. The 1826 census is an important exception, and allows some estimates of the sizes of families which would have accompanied the able-bodied hunters on the Peace River. Figure 1 shows the range of family sizes represented in the 1826 census. The "families" of size one in all cases consist of males who are recorded as having brought in fur hunts. They range from very old men to boys. It is unlikely that they would have remained separated from a larger family unit for any great length of time. Families of size two or greater include parents. Disregarding families of size one the mean, median, and mode for nuclear family sizes in 1826 was 4, 5, and 3, respectively. Local bands could therefore have ranged from a minimum of six members to a maximum of 80 members.

Table 5: Range in numbers of hunters in local bands.

Neighbourhood	Local band size
Lower Peace River	10 - 15 men (Beaver)
Upper Peace River	12 - 16 men (Sekani) 3 - 12 men (Beaver)
Smoky River/Jasper House	2 - 5 men (Assiniboine) 3 - 7 men (Shuswap) 12 men (free trappers)
Upper Athabasca	6 - 27 men (Assiniboine) 10 - 16 men (Cree/Assiniboine)
Lesser Slave Lake/ Lac la Biche	2 - 8 men (Cree) 6 - + men (free trappers)



A. Lower Peace River

B. Upper Peace River

Figure 1: Distribution of family sizes for native population on Peace River, 1826. (Widows and orphans excluded.)

Population sizes for whole neighbourhoods, which are the equivalent of regional bands, are available only for the Peace River and Lesser Slave Lake. For the Lower Peace one estimate of 245 Indians is available; for the upper Peace estimates range from 294 to 526 Sekani and Beaver Indians; at Lesser Slave Lake/Lac la Biche 199 to 300 Cree were present. Equivalent data is not available for neighbourhoods 3 and 4, but the fact that these neighbourhoods were inhabited mainly because of availability of fur rather than food resources suggests that the total population size would have been much less than the Peace River neighbourhoods which were important sources of provisions for traders as well as Indians.

Membership in local bands varied seasonally within a given area to achieve the maximum efficiency in relating the population to the available resources, a typical pattern for hunting, gathering, and/or trapping societies. Helm (1969:216) has pointed out that the only way to analyze the community composition of such socially and spatially mobile groups is to study the make-up of the community at a given point in time.

It is possible to illustrate the composition and the seasonal fissioning of one local band from the fur trade documents for the Peace River. The case is recorded in the Fort Dunvegan journals in the spring of 1843 (HBA:B.56/a/11). At the beginning of the previous winter seven related families were together at a fishing lake. The exact number in the band cannot be determined because the number of children involved is not given; however, a minimum of 25 people were involved as illustrated in Figure 2.

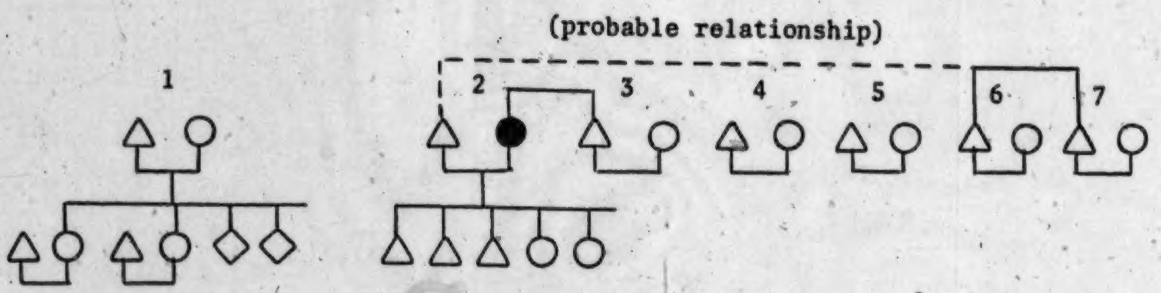


Figure 2: Fort Dunvegan Band, Winter 1842-1843.

As the winter progressed the fishery failed and the party broke into four units to find food on their own. These four units consisted of family 1; family 2; families 3 and 4; and families 5, 6, and 7. An eighth small family joined families 3 and 4 in March. During the course of the winter the unit consisting of families 3 and 4 found game, and one of the adult males went in search of his sister and her family to see if they required assistance. He found only his sister and her two young sons alive--- the rest of the family, including at least two adult males, had fallen victim to cannibalism initiated by the woman (marked ● in Figure 2). The detailed recounting of the history of this band was no doubt due to the sad circumstance of the cannibalism which followed a prolonged period of starvation.[3]

The actual number of kin ties in the foregoing example is probably under-represented due to the obscurity of the information left by the Dunvegan post master. A search of post journals from all neighbourhoods indicated that local bands most often consisted of kinsmen. Identifiable relationships included a man and his sons and/or sons-in-law; a man and step-son; brothers; and brothers-in-law. This array of relationships among males suggests post-marital residence patterns were flexible---that is, adaptable to a requirement that band membership at the local level include sufficient hunters to ensure the survival of the group. Only one case in all of the journals consulted specified a particular pattern of post-marital residence. In this case a young man visited Lesser Slave Lake fort in 1825 on his way back to his father's band, having just divorced his wife and left his father-in-law's band.[4]

Kin ties within and between local band members were undoubtedly reinforced by polygynous marriages. Generally, the number of wives seems to have been limited to two; although as many as four are recorded by the traders. Polygynous relationships usually appear to have been limited to men in positions of prestige, but not all males of high social or political status had multiple wives. Dants Malfait, chief of the Vermilion Indians in 1826, is listed as having only one wife, for example (HBA: B.224/e/1).

Lewis (1942:38-40) has suggested for the Blackfoot that the number of wives in a family increased as a result of contact with traders. As women prepared dried meat, grease, and hides which were bartered to the fur companies, an ambitious hunter or trapper would gain an economic advantage by taking extra wives. In the north preparation of pelts also fell to women; and on the Peace River, at least, a provision trade was quite as important as the trade in furs. It might not be unexpected, therefore, that the incidence of polygynous marriages, or the number of wives per family, would have increased as a result of participation in the northern fur trade as well. Unfortunately, sufficiently detailed documentation is not available to give conclusive proof of such an hypothesis.

The disproportionate number of "adult" females in the Indian population for the three neighbourhoods for which data are available is compatible with a system of polygynous marriages (see Table 6). Although most enumerations separated widows from

Table 6: Distribution of males and females in native populations (Male : Female)

	LOWER PEACE RIVER			UPPER PEACE RIVER			LESSER SLAVE LAKE
Year	Adult	Child	TOTAL	Adult	Child	TOTAL	Adult
1819							43:54
1826	59:68 (10)*	69:51 (11: 5)**	128:119	75:83 (16)	82:61 (16:15)	158:143	
1828				67:90	75:66	142:156	
1830				71:104	118:95	189:199	
1833				101:130			
1835				95:109 (26)	111:109 (26:20)	206:218	
1836				86:139 (25)	148:132 (28:20)	234:271	
1837				86:116	125:120	211:236	
1838				73:105	113: 95	186:200	

* number of widows included in count of females

** number of orphans included in count of children other adult females, no similar separation has been made, in most cases, between married and unmarried adult males. The exception is the 1826 census in which fourteen of the adult men in each of the two Peace River neighbourhoods were unattached. In fact, the numbers of unmarried males and females in the adult portion of these populations are virtually identical, leaving the male to female ratio for the married adult population as 45:58 and 61:67 for the lower and upper Peace River neighbourhoods, respectively.

The reason for the excess number of females in the adult population probably stems from a custom of females marrying at younger ages than males. As a result, males and females of the same age might actually be differently categorized---the male as a child and the female as an adult. The distribution of males and females in the "Child" portion of the population supports such an interpretation. In every case for which data is available there appears to be more male children than female children. While the information to rule out other explanations, such as differential survival rates due to disease or cultural practices, is not extant, the most straightforward interpretation of the figures is that the excess of males has resulted from males remaining unmarried and therefore being counted as children for longer than females. There is evidence from the early nineteenth century and from fieldwork among contemporary native peoples that a desirable age for females at first marriage was about fourteen years of age.[6] The traders, if they were aware of the ages of those they enumerated, may have been categorizing the unmarried males in terms of rules applied in English census records, where fifteen years of age marked the boundary between a child and an adult. Again, Lewis (1942:40) reports for the Blackfeet that in the post contact period there was a trend of females marrying earlier and men marrying later in life. Finally, the male vs. female distribution over the total populations are more nearly balanced in the sense that there is no consistent surplus of either sex over the nearly two decades represented.

The attempts on the part of the traders to control the activities of native populations likely would have affected traditional patterns of movement and social organization. In July of 1843 and August of 1844 the Dunvegan post master successfully requested that the natives forego their traditional ingathering to pick and dry berries in order to disperse to hunt provisions for the fort (HBA:B.56/a/12 and HBA:B.56/a/13). The late summer ingatherings were one of the few times when all, or a significant proportion, of a regional band could assemble. Important socializing, including marriage arrangements and organizing of winter groups took place during such ingatherings. If traders broke up these ingatherings regularly, and they certainly were considering only their own needs in the two years cited, an atomization of the population might be expected. Natives were also encouraged to make spring hunts; for example a band was warned in March 1822 to continue hunting and not to practice the old custom of coming to the fort "during the most favorable period for hunting Beaver..." (HBA:B.115/a/5). Such directions could have broken up patterns of spring ingatherings at a fort as well.

A major change in the logistics of the Athabasca trade occurred in 1823 when canoes were replaced by York boats for the spring brigades leaving Fort Chipewyan, the major depot from which furs were shipped east. The introduction of boats meant fewer men were required for the trip east, and therefore fewer provisions were required to sustain the smaller crews. As the bulk of provisions for the spring brigades was obtained from the Peace River, the reduction of approximately 40% of the amount required at Fort Chipewyan (according to figures quoted in Parker) should have placed considerably less stress on Indians in terms of being pulled away from traditional ingatherings to hunt for the traders after 1823 (Parker 1967:67).

To a limited extent there were overlapping distributions of the various permanent residents of northern Alberta, either on a continued or occasional residence basis. Analysis of band movements by year and season indicates that in these cases the groups usually remained socially and spatially separated within any given neighbourhood. It is interesting to note that Cree and Assiniboine bands trading at Fort Assiniboine remained separate with very few exceptions, even though the post master described the Indians in that area as "... a tribe of Assiniboines mixed with Crees" (HBA: B.8/e/1). Where there are instances of tribal admixture within the neighbourhoods, they frequently represent a task group working for the traders---as fort hunters and meat haulers, for example.

The question arises as to how the native peoples viewed movement from the neighbourhood of one regional band to another. What sense of territory, if any, existed? For the eastern subarctic it has been argued that the fur trade fostered the development of family territories because the aboriginal pattern of family interdependence was broken down due to the availability of food supplies from the trading posts (Leacock 1954; Knight 1965). The available documents for the present study are not of the quality which would support a detailed analysis of family movements. Possible concepts of territoriality must therefore be argued from more subjective information.

The practice of stripping an area of its fur-bearing animals argues against perpetual "family" territories according to Knight (1965:64). This practice was certainly the common pattern during the period of competition prior to 1821. The importance of the provisions trade, and consequent emphasis on hunting large game animals which travelled long distances, likewise would seem to mitigate against family territories in northern Alberta in the early fur trade period.

Finally, in cases where encroachment on hunting grounds is recorded, the reaction of the injured party is not particularly forceful as might be expected if there was a strong committment to ownership of a territory. In 1823 a party of Vermilion Indians was found near Fort Dunvegan having followed the buffalo in winter. But it was not the local natives, but the Hudson's Bay Company trader who undertook "to drive off the Vermilion Indians" (HBA:B.56/a/1).

The April, 1826 Lesser Slave Lake journals report

> Two freemen belonging to the Peace River arrived here in the afternoon for Supplies of Tobacco and Amunition (sic), Having made their Winter Hunts at no great distance from this establishment to the injury of some of our Hunters who have been dissapointed (sic) by their working some of their Beaver Lodges...(HBA:B.115/a/7).

In January, 1838, Dunvegan fur hunters suffered due to "...Saskatchewan freemen having killed the Beaver in the direction they were in the summer" (HBA:B.56/a/6). But there is no record of any attempts to redress these trespasses. In general, any sense of protection of territory, any perceived encroachment, seems to have been recognized by units larger than the family or possibly even the local band. Beaver Indians in general opposed Iroquois being sent to the Smoky in 1822 (HBA:B.56/a/1). Again, when free trappers tried to hunt with steel traps on the north side of the Peace in 1837, they were turned back by the threat of trouble with Beaver Indians in general (HBA:B.56/a/6).

4. Mortality patterns. Again, the dearth of information for precontact populations presents difficulties in assessing the changes in mortality patterns for native populations as a result of the fur trade. Obviously newly introduced diseases could have devastating effects---but native cultural patterns could have protected the populations to some extent. Episodes of starvation occurred after contact and probably also occurred aboriginally---but was there a difference in pattern or degree? Finally, the traders did proffer help to natives who were sick, starving, or too old to keep up with a nomadic band. How important was this assistance?

In northern Alberta epidemic diseases attributable to European contact included measles, influenza, smallpox, and whooping cough. Other diseases which probably were introduced were tuberculosis, veneral disease, and alcohol addiction.

The effects of these diseases on the native population are evident in the census data available for the early contact period. In the one neighbourhood for which population figures are recorded over a series of years---the upper Peace River---the population declined by 140 individuals between 1833 and 1838. The decline was distributed over 28 adult males, 25 women, and 87 children. This period was marked by at least two disease crises; an epidemic of influenza in 1835 and a high rate of death due to a "consumptive complaint" in 1837 and 1838 (HBA:B.56/a/7). The marked decline in 1835 is anomalous; and may be due to a failure to ascertain the total population, part of which may have temporarily withdrawn from contact with the traders.

Even earlier in the contact period other maladies were affecting the health of the Indians of the upper Peace River neighbourhood. In 1820 the Fort St. Mary trader believed that addiction to liquor was the major contributing factor to the early age at death of Beaver Indians. The common pattern of death for Beaver Indians was described as a rapid decline which began with a hollow cough and ended in death in four or five months (HBA:B.190/a/2). These symptoms probably indicate the presence of tuberculosis, which became a major cause of death by the mid-nineteenth century (see Chapter 3).

A measles epidemic in 1819-1820 resulted in the deaths of at least forty natives of "both sexes and all ages" in the Lesser Slave Lake and Lac la Biche area by February of 1820.[7] However, the women and children seem to have suffered most, as the few available population figures indicated that the male population at Lesser Slave Lake increased slightly between 1820 and 1823 while the total population declined in size (see Table 4).

Outbreaks of disease were certainly disruptive to the native lifestyle. During periods of illness success in hunting and trapping was reduced, and during periods of mourning for deceased relatives economic activity might be wholly neglected. But except where deaths seriously depleted a population, or economically crucial elements such as hunters, the very flexibility of band membership, considered the *sine qua non* of hunting, gathering, and trapping societies, provided some buffering of the population against total annihilation due to the ravages of epidemic diseases.

As well, not every outbreak of disease affected all native populations. As Ray points out, the timing of an outbreak had considerable effect on how far it would spread (Ray 1976:142). The dispersed settlement patterns of winter prevented the wide spread of diseases which broke out in that season. Diseases which got a start during warmer weather might be carried long distances by the fur company brigades and introduced into populations concentrated about the posts. In fact, northern Alberta missed some epidemics which affected other native populations due to the fact that outbreaks occurred when people were dispersed in their winter quarters (Ray 1976:142).

Diseases and starvation were probably not intentionally introduced by Europeans as a method of altering native societies in northern Alberta. The Hudson's Bay Company did accuse their opposition of introducing measles into the Lesser Slave Lake neighbourhood in 1819-1820 as a means of commanding loyalty through fear (HBA:B.104/a/2 and HBA:B.115/e/1). However, while the North West Company appears to have capitalized on the presence of the disease to try to effect control over the allegiance of natives, it seems strange that they would be willing to endanger the lives of their hunters and so lose fur returns.

To the effects of disease-induced illness and death must be added the effects of starvation. Again, starvation was no doubt known aboriginally; but there is evidence that a change toward emphasis on fur hunting disrupted the food quest and aggravated the possibilities of starvation. Journals for 1822 record instances of fur hunters "starving most terribly" while at the same time"...they have it seems made a pretty good Beaver Hunt..." (HBA:B115/a/6). Almost ten years later the Lesser Slave Lake post master feared there would be poor returns from White Fish Lake as

> ...these young men are good hunters and still cannot withstand; they found a number of Beaver Lodges but the scarcity of animals prevented them from remaining there (HBA:B.115/a/9).

Even those Indians who hunted for provisions for the traders suffered starvation, likely because they had to concentrate on large game to fill the larder for the relatively large and sedentary population at the posts. When such game was scarce, the tendency was probably to keep hunting, rather than settle for small game such as rabbits unless it came to the last extremity. In this context, it is recorded in the Dunvegan journal for March 19,1839, that two "striplings"

> ...informed us that our other Fort Hunters were in a starving stale (sic), and about to disperse themselves in different directions, to seek small game since they cannot get access to large...(HBA:B.56/a/7).

More often, however, the hunters seem to have persisted in the quest for large game. Colin Campbell, in charge at Fort Vermilion in 1822-1823 noted

> The Natives who are employed to hunt for the Fort are very expensive to the Company & it is attended with some trouble to get them to hunt owing to their being very subject to starve at times when employed as Fort Hunters (HBA:B.224/a/1).

Goddard has suggested that each day that a hunter fails to make a kill his chances of success are reduced, as fatigue and starvation lessen his stamina (Goddard 1916:215). In a time of starvation, Goddard states, the hunters are the first to die, while women and children, not having exerted themselves, survive. If this were true, then it would appear that starvation and diseases may have affected population structure in different ways. If so, this situation could provide an alternative explanation, in some instances, for the apparent imbalance in sex ratios among the adult segment of the population.

In the period of direct contact the traders did attempt to influence patterns of native mortality. Death of natives, especially able-bodied men, was as disadvantageous to the welfare of the trading posts as it was to native society. The traders therefore proffered a helping hand at times of sickness and starvation both to ensure that hunters would survive and to keep their good will, especially in times of competition. Provisions of all sorts---fresh and dried meat, fish, grease---were given out to starving Indians, either at the fort or sent to them in their camps.

Medicines were also made available to native peoples, but on the whole they were probably not very effective. Remedies available at the posts for the treatment of sickness or injury were limited. For internal complaints a variety of purges, emetics, and expectorants were available. Ointments, salves, and balsams were used to treat rashes and small wounds, and to staunch bleeding (Rich 1976:53). Some drugs for treating fevers, for example Peruvian (cinchona) bark, are listed in the Lesser Slave Lake journals (HBA:B115/d/9). But for the most part the treatments available to the traders in the early nineteenth century are not considered useful in modern medical practice.

Preventive medicine at the trading posts of northern Alberta seems to have met with little success. The traders were usually unsuccessful in convincing the Indians, faced with unfamiliar diseases, to take appropriate preventive or cautionary measures which would have enhanced their chances of survival. A vaccination program against smallpox in 1837-1838 was technically a failure at Dunvegan post because the vaccine had deteriorated and took no effect when administered. The program must have succeeded at other posts as smallpox did not spread to Dunvegan---however, another malady appeared in its place.

The presence of the posts did represent a new element in the treatment of illness available to the native population. Ailing members of the local bands who would impede the economic progress of the band if they had to be looked after, would be accepted for care and treatment at the posts. Most often these people were women and the elderly. For example, the Dunvegan journals for February 24, 1824 record

> Late arrived Pouce Coupe and three women they bring Tranquile's sick wife with them with the intention she should remain at the Fort her husband not being able to hunt and drag her about... (HBA:B.56/a/10).

An ailing Saulteaux hunter was given the best care available at Fort St. Mary's in 1821 because his brother, one of the best hunters on the river, promised he and his family would switch allegiance to the Hudson's Bay Company from the North West Company in return for this favor (HBA:B.190/a/3). The traders took in very old Indian men and women to live at the fort because the native practice of abandoning the very old and infirm to die was reprehensible to their European sensitivities.[8]

The native reaction to European diseases does highlight the survival of some customs which are probably of aboriginal origin. For example, although European medicines were sought for a sick child in 1822 at Lesser Slave Lake, they were supplemented (or were a supplement to) a good deal of conjuring and singing by the child's relatives.[9] The traders were not pleased with this custom, for it meant that the Indians were "lingering about the Fort" from September until the death of the child in October when they should have been off making hunts. Death in a group frequently resulted in greatly reduced hunting activity for a period of time. For example, on January 3, 1821, the post master at Fort St. Mary noted:

> the Bull having lost two of his Children will not hunt till the latter end of next month, and is on his way to see some of his relatives (HBA:B.190/a/3).

The fur traders often noted that native hunters were "wantonly" wasteful in taking game animals.[10] The hunters may have acted on the belief that appropriate propitiation would be sufficient to ensure continued game supplies (Ray 1975).

Martin (1978) has offered an alternative hypothesis based on studies of the eastern Canadian fur trade. He suggests that natives reacted to new diseases within the context of traditional beliefs of an animated nature which could be vengeful as well as beneficial toward man. Since epidemic diseases preceeded direct contact with Europeans the Indians regarded the devastating effects as a result of nature which had broken a pact of mutual regard. Their reaction in part was to seek to revenge themselves by overhunting animals whom they blamed for their plight.

5. Origin of a Metis subpopulation: the Freemen. A significant development during the early contact period in northern Alberta was the formation of a new subpopulation which was most closely

allied to the native lifestyle. This subpopulation came into existence as a result of unions between free trappers and local native women about the turn of the nineteenth century. The free trappers have already been alluded to. They were former employees of fur companies who had completed, or been released from, their contracts and had stayed on in the west to hunt and trap on their own account. In northern Alberta some were French Canadians and others were eastern natives, Iroquois and Ojibwa, who had come inland on fur company contracts. In the documents of the traders these ex-employees of fur companies, and sometimes their descendants, are identified as Freemen.

In unions between Company servants and native women, the nuclear families most frequently were terminated when a man was sent to a new posting, or returned to his homeland at the end of his contract. Freemen, on the other hand, remained in the west. Their family units endured, and in the first half of the nineteenth century are identifiable as distinct bands throughout the five northern Alberta neighbourhoods.

It seems most likely that Freemen found most of their mates among the Cree bands. Of the local groups with available females, the Cree were probably most similar to the Freemen in their degree of attachment to a fur trade economy. Demographic records are too incomplete to be compelling, but on the Peace River there does not appear to have been any surplus of unmarried women among the Beaver Indians, if the arguments for polygyny and early age at marriage are accepted. Furthermore, Mackenzie records that the Beaver were against intermarriage with Europeans (Lamb 1970:255).

The wives of Freemen who appeared to have their children baptised at Jasper House in 1838 were given as either Cree or Metis (Warner and Munnick 1972). And in the Lesser Slave Lake/Lac la Biche neighbourhood, the native population from which women were available was predominantly Cree by the beginning of the nineteenth century.

Freemen frequented all five neighbourhoods in the Peace and Athabasca River basins. The traders encouraged Freemen to travel widely, particularly during the period of competition before 1821. In 1819 Francois Heron of the Hudson's Bay Company noted the competitive edge which the North West Company gained by having a task force of trappers to be dispatched "wherever there are Beaver to be found". [11] Their active seeking out of new fur-hunting grounds on occasion lead them to encroach on areas usually frequented by others. In 1829, for example, Fort Assiniboine Freemen were threatening to hunt on grounds claimed by Beaver Indians.[12] The Iroquois were the most aggressive hunters; and their concentration along the Smoky River appears to stem from the fact that they were willing to pioneer a new beaver-rich, if often game-poor, area.

Population figures for Freemen bands are unfortunately seldom given. The 1826-1827 figures in Table 7 actually refer to "Freemen in Peace River" according to the Fort Vermilion census taker. The population of 29 Freemen was divided into seven families plus three single adult males. The male members of these families were Iroquois, Saulteaux, and French Canadian.

Table 7: Population figures for Freemen in northern Alberta.

	UPPER PEACE RIVER*						LESSER SLAVE LAKE				SMOKY RIVER/JASPER HOUSE			
Year	Men	Young men	Women	Boys	Girls	TOTAL	Men	Women	Subadults	TOTAL	Men	Women	Subadult	TOTAL
1820							23	16	58	97				
1822							50**							
1823							58**			184	23**			
1826	10	1	8	7	3	29								
1828	14	3	16	13	10	56								
1830	13	4	12	14	18	61								
1833	17		13	Children = 45 Infants = 1		76								
1835	14	3	10	12	11	50								
1836	11	1	12	15	11	50								
1837	10	1	12	15	10	48								
1838	9		11	12	10	42					14	16	28	58

* may include some Iroquois Freemen from the Smoky River

** men able to hunt

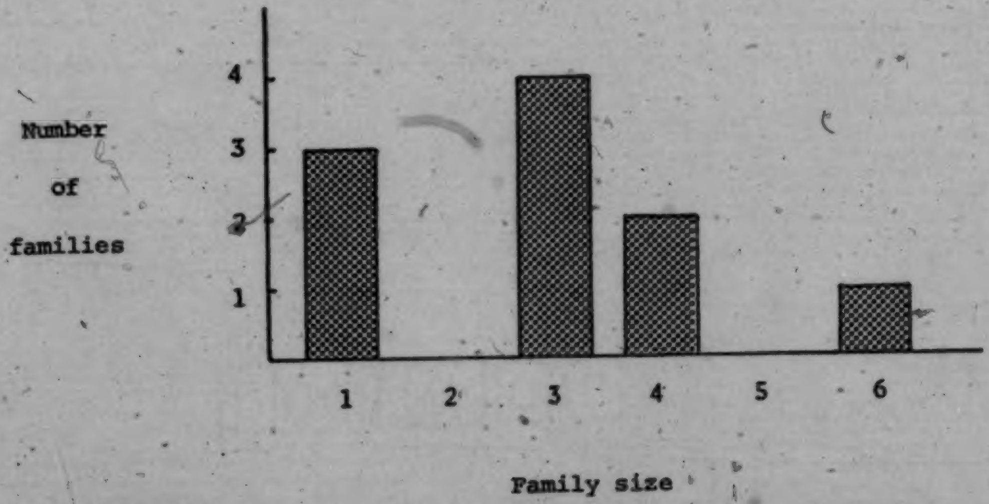


Figure 3: Distribution of sizes for ten families of Freemen on Peace River, 1826.

The greatest concentration of Freemen was in the Lesser Slave Lake/Lac la Biche neighbourhood. In fact, by 1822 the number of Freemen able to hunt outnumbered able-bodied hunters among the local Cree population by 50 to 30 men (HBA:B115/a/3). In the Smoky River/Jasper House neighbourhood the Freemen were mainly Iroquois with some French Canadian, and at Lesser Slave Lake/Lac la Biche French Canadian men were in the majority. In generations subsequent to the original unions marriages seem to have been contracted within the Freemen population. On Peace River, for example, Saulteaux and French Canadian descendants had intermarried by the 1840's.

The general subsistence pattern followed by Freemen bands paralleled that of the local Indian populations. Freemen too were hunters, fishers, gatherers, and trappers. As the example on page 39 illustrates, they too had to follow a system of flexible band membership as an adaptation to the seasonal variation in resources. But in point of emphasis they were fur trappers. The founders of the Freemen population had consciously followed the fur trade inland to maintain a style of life closely tied to a fur trapping and bartering economy. In the period of competition before 1821 they were encouraged to specialize through preferential prices (half of what Indians were required to pay for the same goods), gifts, and easy credit.[13]

The fact that Lesser Slave Lake post showed exceptionally high fur returns in 1821-1825 is best explained in terms of the large Freeman population of highly skilled trappers in the area.

In 1821 Lesser Slave Lake post accounted for one-fifth of the beaver returns in the Northern Department and just over one-twelfth of the total for the Hudson's Bay Company. The proportions for marten returns were similar. By 1823-1825 Lesser Slave Lake post was returning one-fortieth of the trade for the Hudson's Bay Company--still a larger than average share.[14]

Although preferential treatment of Freemen was curtailed after 1821 they did not, perhaps could not, give up an emphasis on fur trapping. The only way that the Hudson's Bay Company could enforce a conservation policy in the Lesser Slave Lake district was to totally close Lesser Slave Lake post in 1827. Previous attempts to cut fur returns by one-half for the post had not been successful (Baergan 1967:110). As long as the post was in the area the Freemen would continue to trap.

The Freemen did have one significant similarity to the Euro-Canadian traders. In some cases they also showed resistence to the epidemics that caused havoc among local native populations. Although some of the Lesser Slave Lake Freemen contracted measles in 1819-1820, none of them perished. In comparison many natives from Lac la Biche and Lesser Slave Lake died. Only one Freeman, Thomas Dejarlais, is reported to have suffered a relapse which resulted in paralysis of one arm and part of his side (HBA:B.104/a/2).

Freemen on the Peace may not have escaped the epidemics of the 1830's. At the end of 1835 there were 23 fewer children and 3 fewer adult females in the Freemen population compared with 1833 counts. The number of males remained constant. The 1838 figures show a loss of 2 males, 1 woman, and 4 children compared with 1836. The large decline in 1835 correlates with the influenza epidemic. Unlike measles, immunity to influenza with its many strains is not common even if members of a population have previously been exposed to the disease. The 1838 losses are less impressive and could easily be accounted for by migration.

The Freemen bands of northern Alberta were perpetuated throughout the early contact period through intermarriage. Like the Indian groups with whom they shared the area, their bands represented kinship networks. Descendants of the founding population were often called halfbreeds by the Hudson's Bay Company traders, a term which did not at the time carry the derogatory overtones which it was later to assume. In the first half of the nineteenth century the use of the term "halfbreed", or its French equivalent, Metis, implied recognition of a social and cultural entity distinct from either the Indian or Euro -Canadian culture in the west (Foster 1978:9). In the latter half of the nineteenth century descendants of these Freemen bands were among those enumerated by the "North West Half Breed Scrip Commissions." In the twentieth century later descendants are studied by the 1935 "Royal Commission on the Condition of Halfbreeds in Northern Alberta."

Parenthetically, it is interesting that the Cree call the Metis "O-tee-paym-soo-wuk" --their own boss (Anderson and Anderson 1977). The expression conjures up the image of the original Freemen who chose to operate outside of fur company contracts. At a later period it is reminiscent of the "halfbreed" descendants who sold their scrip, often at considerable monetary loss, in order to continue their hunting and trapping lifestyle, rather than become tied to proving out a homestead.

Discussion

During this earliest contact between cultures the economy of the native peoples was based on hunting, gathering, fishing, and trapping. The native population functionally was divided into local bands ranging in size from less than ten to as many as eighty members. The smaller bands were common in late winter and early spring when food was most difficult to obtain. The larger bands were common in the warmer months; and where resources, such as berries, were found in concentration; and in the late spring and fall when the natives came to the posts to barter pelts and obtain credit. During large gatherings local bands were reconstituted as marital alliances were formed or broken, and economic partnerships arranged. On occasion these ingatherings appear to have consisted of the entire membership of a regional band. The latter unit was the largest group within which an individual found his political, social and economic relationships. Available figures for regional band sizes range from 164 to 526 members.[15]

Regional bands exploited discrete geographical areas; but boundaries were not hard and fast, and members of different bands might travel to other neighbourhoods and interact with regional bands other than their own. In fact, there does not appear to have been a strongly developed territorial sense, at least with regard to game and fur-bearing animals. Perhaps this apparent lack of perceived ownership of economic resources was the reason that a new subpopulation, parallel in lifestyle but socially distinct, could be founded by immigrant free trappers in the very neighbourhoods utilized by native bands.

From a diachronic perspective it is obvious that the operation of the fur trade affected many aspects of native culture. From earliest meetings in the 18th century until about 1850 the contact between native and Euro-Canadian cultures in northern Alberta was mediated through the fur trade. From the European point of view, the fur trade was predominantly an economic venture, and their relationships with native people most often were guided by an interest in the business advantages to be gained.

The most obvious changes in native populations resulting from the introduction of the fur trade were the population displacements which resulted from long range migration of native trading and trapping specialists from the east and southeast. Insofar as some of this native immigration preceeded establishment of a permanent European presence in the area, the first fur trade companies found a native population already adapted to an economy based on trapping and bartering furs. Many basic changes in aboriginal pre-indirect contact culture may already have taken place before written records came into existence for the area.

The aboriginal settlement pattern would have been modified by an emphasis on trapping. The focus of spring and fall ingatherings became the traders' posts. This pattern may not have been a great departure from the pre-contact localities, for the traders too had to consider problems of transportation and food supplies, and often built at traditional ingathering sites. Other ingatherings, particularly those for gathering seasonal plants, occurred at some distance from the posts; and would seem to relate to the aboriginal pattern of resource exploitation. The general effect of the fur trade on these ingatherings seems to have been to shorten their duration. The post masters attempted to process bands coming to the forts as quickly as possible. Their reasons were primarily economic and secondarily self defense. Indians lingering about posts were deemed to be wasting prime hunting time. This same attitude of self-interest was also reflected in the disruption of late summer ingatherings by obliging natives to make provisions hunts for the company brigades. The traders were justifiably fearful of having large numbers of bands about the post at one time, especially when natives were further emboldened by the regales of rum which custom and courtesy demanded. The overall result of the traders' efforts was to reduce the length of time for individual ingatherings, and this situation probably had the additional effect of reducing the number of bands meeting together and therefore the number of social contacts made annually.

A difficulty in identifying changes in native social organization stems from the bias which traders had toward reporting on male members of the populations. Thus, although it is possible to demonstrate kinship ties between male members of bands, it is not possible to indicate whether or not rules of relationship based on females were important in group formation.

A new type of group developed among native populations in response to the economic activity of fur bartering. This was the trading group, led by a trading captain who negotiated with the fur company representatives but had little other special function within native society. Compared with aboriginal task groups, the trading group was probably larger and of more limited duration. The trading captains were selected by the traders on the basis of their ability to bring in numbers of men with good hunts, but their status in native society was reinforced by the favors bestowed on them by the post masters. By withdrawing indulgences after 1821 the Hudson's Bay Company effectively undermined the social position of these captains.

Disrupting to the native social organization as well were the changes in mortality patterns during the early contact period. The introduction of infectious diseases depleted native populations of members, or at least reduced their self-sufficiency, several times within the period discussed. In the area of medical assistance the traders were generally ineffective. Insofar as they were able to provide food or a resting station to help natives through bad periods they may have been of some real assistance in averting mortality, particularly mortality due to starvation when illness prevented hunting.

Finally, the formation of a subpopulation of fur trapping specialists represents a very visible effect of the fur trade. Cohabitation between natives and company employees, as well as Freemen, was a common practice in the fur trade. Such unions served to establish alliances with the native population which could be beneficial from a business as well as a social point of view (Foster 1978). As the Freemen generally stayed on in an area over a long period of time, usually longer than a company employee, their unions endured and ultimately developed into a distinguishable subpopulation. Initially, at least, there were affinal ties to the local native populations; and the importance of these should not be overlooked in making it possible for eastern immigrants to establish themselves in areas already utilized by native peoples. Their concentration on trapping and trading furs tied them in an economic sense to the fur companies. Perhaps these ties were also reinforced by marital ties with progeny of company employees and native women. The Freemen population subsequent to the founding generation seems to have become largely endogamous in the first half of the 19th century, as can be seen from genealogical evidence. In the last half of the 19th century descendants of Freemen are clearly identifiable in the records of the Treaty and Scrip commissions which organized the surrender of aboriginal title to the Canadian west in preparation for encroaching European agricultural and industrial settlement.

Conclusions.

Initial contacts between native and European cultures had far reaching effects for the former group. The earliest changes were economic and technological; i.e. the introduction of fur trapping and the acquisition of a wide range of new items of material culture. Changes in social organization followed, as the fur traders attempted to dictate patterns of population migration and aggregation, and introduced immigrant males into the native community. The economic advantage of extra wives may have led to an increase in polygyny. Mortality levels were affected adversely by starvation and introduced diseases although the fur traders made some attempt to mitigate these effects.

Although many aspects of aboriginal culture remained, the fur trade promoted an interdependence between cultures in which the Europeans were generally at an advantage. In times of adversity they could retreat to a more favorable region, or abandon the trade altogether. In times of illness they often had the advantage of immunity built up in childhood. In this earliest contact between diverse cultures in northern Alberta the burden of adaptation fell on the native groups.

Finally, it is assumed that the present analysis covers all native populations in the study area from earliest contacts to 1850.[15] How far can the changes demonstrated for these populations be generalized to other periods of time and other populations?

While some aspects of native culture in the early contact period appear to be carried over from aboriginal culture, the extension of ethnographic analogies to the pre-contact period should be approached with great caution. Although band organization may have been similar, the degree of dependence on European markets, goods, and aid are an adaptation to a resource not known aboriginally. The changes are described for boreal forest populations, and have limited applicability to other culture areas. For the Indians of the northern Plains, for example, the fur trade represented a market through which they could obtain luxuries rather than the necessities of life (Lamb 1957:72; Morton 1929:64). Although they did bring in some furs from the foothills area, and were able to sell provisions to the Saskatchewan posts, they were also able to maintain a greater degree of independence for a longer period of time than the woodland Indians. In part this situation must have been related to the fact that trading posts were not established among Plains groups to the same extent as in the north, and so the intensity of contact was reduced.

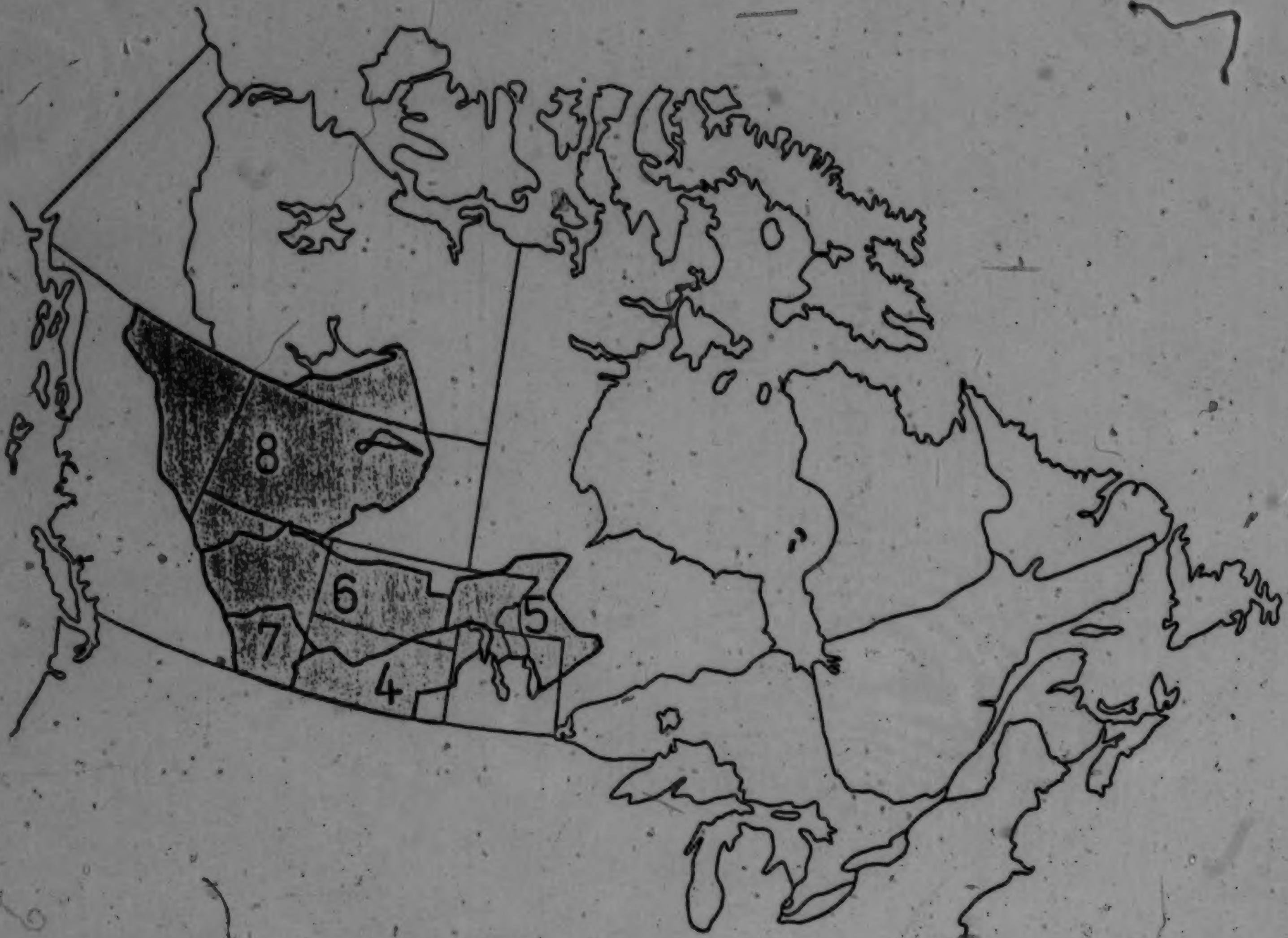
CHAPTER III

MIGRATION PATTERNS OF THE METIS POPULATION IN THE CANADIAN NORTH WEST 1850 - 1900

Introduction

Demographic studies of Canadian native peoples to date have been based on aggregated data from government censuses of registered Indians, or are contemporary case studies in which various demographic parameters are investigated for specific native populations. These approaches are limited to the study of twentieth century populations which are most often Indian as opposed to Metis. The present chapter introduces a new body of demographic data from the nineteenth century, and illustrates its use in the study of Metis migration patterns in western Canada.

During the second half of the nineteenth century the native population of western Canada experienced an increase in the variety and number of contacts with Europeans. The fur traders continued to maintain an important economic and social position, especially in the north; but as the century progressed there was increasing influence from church and government representatives. In addition to the effects of the fur trade on native demographic patterns outlined in the previous chapter there now were other interests seeking to control native population distribution and movement. The missionaries encouraged settlements and agriculture to facilitate their efforts to proselytize and, in general, "civilize" native



Map 5: Canada 1899. Areas covered by NWHB commissions (ceded by Treaties 4, 5, 6, 7, 8).

peoples. With the transfer of Rupert's Land from the Hudson's Bay Company to Canadian government control on July 15,1870, the latter agency became involved in directing native population distribution and movement in preparation for opening the Canadian west to European settlement and agricultural development. It was a period also during which native populations were experiencing stress due to the extermination of bison herds on the northern plains and the decline of game animals in the northern forests.

The present chapter examines the effects of these influences on Metis migration patterns in that area of western Canada comprised of the districts of Assiniboia, Saskatchewan, Alberta, Athabasca, and adjacent sections of the district of Mackenzie.[17] The area considered is indicated on Map 5; and corresponds to the parts of the Canadian North West surrendered by Treaties 4, 5 (as defined up to 1876), 6, 7, and 8 with the Indians and subsequently by scrip with native peoples of mixed ancestry.

In the following analyses and discussion the term native will refer to both Indian and Metis people. The term Metis is used to refer to people of racially mixed ancestry because it is the term now preferred by contemporary descendants. In the nineteenth century the term "half-breed" was in common use and it is the term which usually appears in official documents; so where historical documents are quoted the term half-breed is retained.

Materials

Missionaries and government commissions added enormously to the quantity and quality of demographic data available for native populations in the west. For the present analyses data have been obtained primarily from the applications for North West Half Breed (NWHB) scrip located in the Department of Interior Records, Public Records Division, Public Archives of Canada.

The applications filed for NWHB scrip constitute a synopsis of certain aspects of the life history of each applicant, and therefore have considerable advantage in demographic analysis, as some of the labour involved in linking records of discrete events, and the inevitable error load, are largely avoided. A sample application form is included as Appendix I. Additional data sources, including parish registers, Treaty documents, and reports of government surveyors and committees have been utilized to check interpretations based on the NWHB scrip records.

The NWHB scrip applications represent Metis people who applied for land or money scrip in return for the surrender of their claims to aboriginal title in lands which had previously been surrendered by Indian treaties 4,5,6,7, and 8. The historical background to the NWHB scrip commission is discussed by various authors, (Hall, 1977; Mair 1908; Street in Langton 1944), and the present discussion is confined to a description of the population sample represented by NWHB scrip applicants.

According to a Department of Interior report for 1929, the NWHB commission received some 14,113 applications between 1885 and 1901 (PAC:RG15 Vol.227:32). The number of cases utilized in the present analysis, 12,333, is somewhat smaller, as duplicate applications and cases with insufficient information have been dropped.

It is also possible that some original applications were not included in the main accession file at the Public Archives of Canada.

The identity of the scrip applicants is indicated in part by the criteria set for eligibility. Initially only Metis children or heads of families born in the North West Territories before the date of transfer from the Hudson's Bay Company (July 15,1870) were eligible to receive scrip. These criteria did not satisfy the Metis population and they argued successfully for a broader eligibility. The final result was that

> ...the title of those born in the Territories between 1870 and 1885 (was) recognized; so too were the claims of children, born in the Territories in that period, of parents whose title previously had been extinguished in Manitoba. Also admitted were the claims of children of deceased Metis who had been born between 1870 and 1885. (Hall,1977:7)

It was possible for descendants to claim on behalf of deceased relatives who met these eligibility criteria. Of the 12,333 applications, 3,429 were on behalf of deceased individuals. The distribution of deceased applicants in the NWHB sample is probably not random. In the report for the first season of work by the NWHB commission it was noted that of 1942 claims recommended

> ...304 of these claims were made by the heirs of deceased persons who would themselves have been entitled had they been living. The largest number of claims of this description were presented at and near St. Albert, which district some years ago suffered from a very fatal outbreak of small-pox. (Canada. Department of Interior Annual Report for 1885:xxxii).

To view the NWHB population in the context of the total native population residing in the areas surrendered by Treaties

4 through 8 an attempt has been made to estimate minimum and maximum sizes for the combined Indian and Metis populations and the population density by Treaty area.

Population sizes for Indians in Treaties 4 - 7 are taken as of 1885 and for Treaty 8 as of 1900 (Canada. Indian Affairs Annual Report for 1885:194 and Annual Report for 1900:163).[18] The 1885 date coincides with the first year in which the scrip commission sat and the last year of eligibility to receive scrip. Before Treaty 8 was signed in 1899-1901 adequate population estimates for the area north of Treaty 6 were lacking, and it is therefore not possible to define comparable populations at an earlier date.

The population size within the study area ranged between 42,509 and 36,454 in the late nineteenth century (Table 8). Population density ranged between ten and fourteen people per 100 square miles on the plains and one to four people per 100 square miles in the forested regions of the north (Table 9).

The term "half-breed" or Metis suggests that the NWHB applicants came from a racially mixed parentage. Table 10 illustrates that most of the applicants indicated their parents were "half-breeds," unfortunately without qualifying precisely the ancestry involved. European ("white") and Indian ancestry likewise was most often not further qualified. The national or tribal designations which were specified are indicated in the right hand column. In both cases, however, the specifically identified groups account for slightly less than half of the "European" and "Indian" samples,

Table 8: Native population at time of NWHB commission sittings, 1885 to 1901.

Treaty 4 (Saulteaux and Cree)	5,301
Treaty 5 (Chippewa, Cree, Saulteaux)	3,307
Treaty 6 (Plain and Wood Cree)	8,126
Treaty 7 (Blackfeet)	6,415
Stragglers[19]	1,192
Non-Treaty Indians	1,199
Total population in 1885	25,540
Treaty 8 (Cree, Chipewyan, Beaver, Slave, Dogrib, Yellowknives) in 1901	3,323
Total Indian population	28,863 (1)
Number of Metis withdrawn from Treaty (to 1892)	1,313 (2)
Number of applications for living Metis	8,904 (3)
Number of applications for deceased Metis	3,429 (4)

Plausible range of estimates of native population, 1885-1901:

An upper estimate = 1 + 2 + 3 + 4 = 42,509

A lower estimate = 1 - 2 + 3 = 36,454

Table 9: Density of native population per 100 square miles by Treaty area.

Treaty number	Area (in square miles)	Indian population (including non-Treaty)	Metis applicants claiming last residence in Treaty area	Total native population	Density Persons/ 100 square miles
4**	75,000	6,260	1,459	7,719	10
5	100,000	3,307	667	3,974	4
6**	120,000	9,558	4,643	14,201	12
7	50,000	6,415	592	7,001	14
8	317,350	3,323	1,216	4,539	1

*Areas for Treaties 4 - 7 are given in Morris (1880). The area for Treaty 8 was calculated by a surveyor with the Edmonton office of the Department of Indian Affairs.

**a number of Stragglers and non-Treaty Indians are included in these Treaty areas in 1885.

Table 10: Ethnic distribution of parents of NWHB applicants.

Parents of applicant	Frequency	National or tribal identity (in decreasing order of frequency)
"Half Breed"	87%	
European	7%	French Canadian; Scottish; English; Irish; Norwegian; Orkney; American; German
Indian	4%	Cree; Chipewyan; Blackfoot; Iroquois; Saulteaux; Swampy (Assiniboine); Sioux; Snake
Not indicated	2%	

and the order of frequency indicated may therefore be misleading.

It is also misleading to assume that strict biological distinctions were made between those eligible for Indian Treaty and those eligible for "half-breed" scrip. People of mixed Indian and European ancestry could and did openly enter Treaty.[20] By June 1, 1892, some 1313 such people had obtained discharges from Indian Treaties in order to take scrip (PAC:RG10 Vol. 3888 File 83,93).

Since treaty provided benefits in perpetuity and scrip was a once-in-a-lifetime payment it is somewhat strange that people who apparently had access to both would opt for the latter. In part the explanation may be that NWHB scrip was preferred precisely because, unlike Treaty rights, it was transferrable. The idea behind granting scrip may have been to start people on the road to self-sufficiency by helping them to acquire homesteads; but in fact the majority of successful applicants sold their certificates, often well below face value, and continued a hunting and trapping lifestyle rather than becoming farmers. A comparison of the numbers of land scrip vs. money scrip issued supports this observation. Of 1,942 claims recommended after the commission first sat in 1885 only 232 were for land and 1,710 were for money certificates (Canada. Department of Interior Annual Report for 1885:xxxii). When the commission later visited the district of Athabasca in conjunction with the signing of Treaty 8 they distributed only 48 out of 1,843 scrip certificates for land (Mair 1908:458).

An obvious concern regarding demographic data collected in non-literate populations is the accuracy of dates and ages as they were recalled by informants. There are instances in the coded data base in which different informants, parents and children for example, will give slightly different dates for the same events. Failing any method of cross-checking the data in question the information given by the person most likely to have accurate first hand knowledge of an event has been accepted. It is clear however, that the scrip commissioners were not only cognizant of the problem but went to some lengths to get accurate information. The following quote from a diary written by W.P.R. Street, chairman of the NWHB Commission in 1885, suggests there is reason to accept the data in applications with some confidence.

> Every head of a family was required to state on oath the names and ages of children... Most of the families were very large, and the parents were never able to give accurately any date axcept that of their own marriage, emphasizing the fact that the eldest child was always born within a year from that date. Their usual plan was to allow a child for every two years down th the date of birth of the youngest, but this generally required correction. For instance, a man married in 1861 would tell me that he had twelve children, the eldest, say Angelique, being born in 1862. He could tell me the names of the others and the order in which they came, but not the year of their birth, except that there was an interval of about two years between them. I would then go through his whole list, Gabriel, Josephine, Anselme, Virginnie, Napoleon, Julienne, Theophile, etc., until we came to Celestine the youngest, who should, according to this method of computation, have been born in 1884 and be then one year old. Then would come a vehement protest and Celestine would be produced and pronounced to be five or six years old. Then it would perhaps be remembered that a couple of pairs of twins and a death or two had marred the biennial symmetry of the family, and that

> the scale must be readjusted accordingly. It was generally possible to correct the results by comparison with such collateral facts as the dates of the marriages of Angelique, Gabriel and Josephine, and the births of their children: for they all married young and had families early. (Street in Langton 1944:50)

The occurrence of duplicate applications by the same individual is rare in the applications utilized in the current study. The commissioners again were careful to prevent people from applying more than one time. People who were familiar with local populations, often priests, travelled with the commission when possible. In the case of discharges from Treaty written proof of eligibility from the appropriate Indian agent was required. Forms for discharge from Treaty, in fact, are equally informative as the scrip applications; and an example is included in Appendix II.

The NWHB commission for the Treaty 8 area carried with it "... five elephant folios containing the records of the bygone issues of scrip in Manitoba and the organized Territories" in which the name of every applicant was searched (Mair 1908:374). Charles Mair, a member of the commission in 1899, reported that very few efforts were made to apply more than once; and expressed great admiration for the honesty of the Indians and Metis dealt with by the commissions "throughout these remote territories" (Mair 1908:374).

Methods

1. Data preparation and storage

Demographic data for 12,333 unique cases from the index of NWHB applications prepared by the Public Archives of Canada were keypunched onto cards and subsequently transferred to magnetic tapes. The 36 fields of information entered are described in Appendix III.

2. Analysis of data

(a) A subset of applications was selected for detailed migration analysis; viz: all recorded first marriages. This subset was sorted into further subsets of matched spouses; first marriages for males; first marriages for females; and into pre- and post 1885 marriage cohorts for each sex.

(b) The geographical localities represented in the NWHB scrip applications, which numbered more than 900, were grouped into fifteen geographical categories to facilitate analysis. The fourteen categories on the North American continent are illustrated on Map 6. The first five categories correspond to the neighbourhoods defined in the previous chapter. Categories 6 to 11 correspond to large regions defined in terms of the districts of the North West Territories as they existed in 1889. The remaining categories are defined in terms of even larger political entities.

The first nine categories and parts of 11 and 12 include the area covered by the NWHB commission. Most of 10, 11, 12 and all of 13 to 15 fall outside of the area in which scrip was granted.

(c) The samples of first marriages were distributed into the fifteen geographic categories and cross tabulated by selected variables using SPSS programs. The resulting matrices define the amount of migration within and between generations; migration patterns by sex, and endogamy rates for this subset of data. Categories of information available are indicated in Table 11.

Results of Analysis

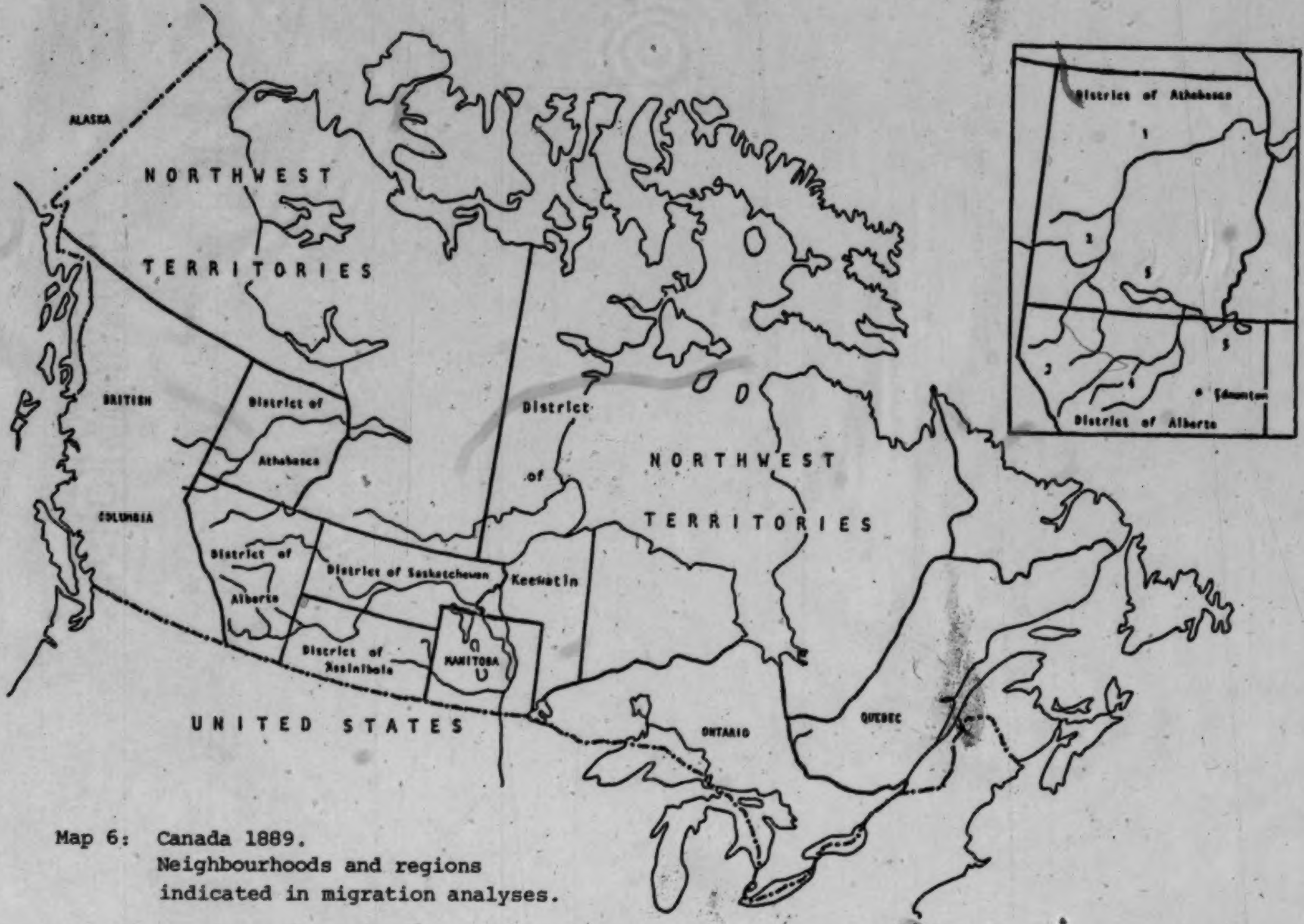
1. Population distribution

Table 12 illustrates the distribution of NWHB applicants who were single or had married for the first time. The total number in any area includes all single applicants born there plus all first marriage cases born and residing in the area. The latter numbers represent the sum of row and column totals, minus diagonal values, for the crosstab matrix of birthplace by last address. Both Treaty and half-breed commissions endeavored to reach all eligible native peoples in the North West Territories in order to settle as completely as possible all claims to aboriginal title. Groups not contacted in the first season of work were met with in subsequent trips, resulting in several adhesions to Treaties; and by first-hand accounts, virtually a complete census of those outside of treaty who were eligible for scrip.[21] The settlements visited by the NWHB commission are listed in Table 13.

The first nine geographical areas in Table 12 fall entirely within the region covered by the NWHB commissions. While the total numbers of Metis in each of these areas may be somewhat overestimated because the applications were cumulated over a period of

Map 6: Canada 1889. Neighbourhoods and regions indicated in migration analyses.

1. Lower Peace River	(Inset map)
2. Upper Peace River	(Inset map)
3. Smoky River/Jasper House	(Inset map)
4. Upper Athabasca	(Inset map)
5. Lesser Slave Lake/Lac la Biche	(Inset map
6. Other Athabasca	
7. Other Alberta	
8. Saskatchewan	
9. Assiniboia	
10. Manitoba	
11. North (Northwest Territories, Keewatin, Alaska)	
12. British Columbia	
13. East (Ontario, Quebec)	
14. United States	
15. Other continents (not shown)	



Map 6: Canada 1889.
Neighbourhoods and regions
indicated in migration analyses.

Table 11: Categories of information available.
The "TOTAL" columns include cases in which date of marriage is not known, and, therefore, the figures in these columns are larger than the combined numbers of cases for the cohorts.

	Married pre-1885	Married post-1885	Total	Married pre-1885	Married post-1885	Total
Birth only	871	372	1,372	1,115	580	2,111
Marriage only	848	235	1,088	1,057	360	1,429
Residence only	887	375	1,376	1,150	581	2,132
Birth + marriage	788	227	1,020	989	350	1,350
Birth + residence	834	361	1,298	1,077	561	2,024
Residence + marriage	805	229	1,039	1,017	346	1,373

Table 12: Native population in the Canadian North West in the late nineteenth century.

Area or locale of residence/birth	Single M	Single F	M 1st marriage	F 1st marriage	Total Metis	Total Indian
Lower Peace River	9	10	32	49	100	599*
Upper Peace River	34	22	61	90	207	218*
Smoky River/ Jasper House	62	35	39	50	186	119*
Upper Athabasca	5	6	5	1	17	0
Lesser Slave Lake/ Lac. La Biche	272	173	267	343	1055	480*
Other Athabasca	27	16	36	40	119	1019*
Other Alberta	1102	654	359	665	2780	9215
Saskatchewan	1172	832	312	639	2955	4580
Assiniboia	943	613	161	289	2006	5265
Manitoba	676	474	430	583	2163	10871**
North	159	91	169	207	626	888*
British Columbia	3	3	3	11	20	38470***
East	22	20	19	24	85	
United States	27	27	48	100	202	
Other Continents	1		5		6	
Unknown	306	225	178	224	933	

Metis population figures include single males and females and first marriages in which people were born and/or residing in the North West Territories.

Indian population figures are taken from 1885 census of band populations except for figures marked * which come from Treaty 8 census of 1900 - 1901.

**Treaty 1, 2, 3 and 5 populations.
***The figure is for all of British Columbia.

Table 13: Settlements visited by NWHB scrip commission one or more times between 1885 and 1901.
Claims were also received at various points on the trails as the commission travelled through the country.

DISTRICT OF ALBERTA

Lethbridge
Fort Macleod
Pincher Creek
Calgary
Edmonton
Victoria
Saddle Lake
St. Paul des Metis
Lac la Biche
Athabasca Landing
St. Albert
Lac Ste. Anne
Fort Saskatchewan
Wetaskiwin
Duhamel
Lacombe

DISTRICT OF ASSINIBOIA

Willow Bunch
Fort Qu'Appelle
Touchwood Hills
Swift Current
Maple Creek
Medicine Hat
Regina
Moose Jaw
Fort Pelly

DISTRICT OF ATHABASCA

Lesser Slave Lake
Peace River Crossing
Fort Dunvegan
Wolverine Point
Fort Vermillion
Fort Chipewyan
Smith's Landing
Fort McMurray
Lake Wabascaw
Pelican Portage/Narrows
Grand Rapids
Calling River Portage
Isle a la Crosse
Stanley Mission

DISTRICT OF SASKATCHEWAN

Prince Albert
Duck Lake
Batoche
Snake Plains
Sandy Lake
Devil's Lake
Green Lake
Battleford
Onion Lake
Bresaylor
Fort a la Corne
Sturgeon River
Cumberland House
Birch River Portage
The Pas
Cedar Lake
Grand Rapids of the Saskatchewan
Saskatoon
Red Deer Lake
St. Laurent
Fort Pitt
Forks of Saskatchewan River
Moose Lake
Montreal Lake
Shell River

MANITOBA

Fort Alexander
Winnipeg
Griswold
Russell

North West Territories

Fort Resolution

Table 13 (continued)

MANITOBA SUPERINTENDENCY (TREATY 5)

Norway House
Grand Rapids
Totogan
Sandy Bay
Manitoba House
The Narrows
Fairford
Water Hen River
Pine River
Duck Bay
Poplar River
Berens River
Fisher River

years, proportional distribution of the population is reflected and can be compared with the Indian population in the same area as recorded in the Annual Reports of the Department of Indian Affairs for 1885 and 1900.

Areas predominantly inhabited by Metis population are the Smoky River/Jasper House and Lesser Slave Lake/Lac la Biche neighbourhoods, while the upper Peace is nearly equally represented by Indian and Metis populations. The upper Athabasca, an area falling within the region eligible for scrip, in effect has no viable population unit; and must be considered to represent an area of intermittent occupation. All other areas which can be adequately sampled show a predominance of Indian peoples.

2. Migration Patterns

Migration patterns were analyzed for the sample of first marriages only. Four different approaches were taken:

(a) migration after birth was examined for sexes separately by comparing proportions marrying and/or residing in their birth locality for pre- and post-1885 marriage cohorts.

(b) immigration into NWHB neighbourhoods and regions was identified by area and ranked in order of size of contribution (measured in absolute numbers) made to each area for sexes separately,

(c) endogamy rates were computed for the subset of data of matched spouses and compared with migration patterns for husbands and wives separately as defined in analysis (a),

(d) endogamy rates were computed for individual settlements for sexes taken separately.

2 (a) Migration after birth for males and females in first marriage sample

Tables 14 and 15 compare the frequency with which males and females who were married and made their residence in an area had also been born there. The choice of 1885 as the break-point between the two marriage cohorts was made for two reasons. By 1885 in the southern districts, the plains buffalo hunt had become a lifestyle of the past and new modes of subsistence were forced on the indigenous populations. As the year in which the NWHB commission began its work, 1885 was the earliest date at which eligible Metis families would have obtained government assistance in establishing themselves on homesteads.

Three levels of population units are represented in the analysis. The first five localities correspond to the local neighbourhoods defined by the distribution of hunting bands in the pre-1850 period. In addition, "Other Athabasca" could be included in the neighbourhood category since, by its present definition, it is limited to the west end of Lake Athabasca and the lower Athabasca River, an area occupied primarily by Chipewyan Indians (see for example Dempsey 1978:66). Localities designated Other Alberta, Saskatchewan, and Assiniboia are major districts which include large populations and a number of centers of settlement. Manitoba and the North were partly ascertained by the NWHB commission. Results for neighbourhoods with small sample sizes, the Lower Peace River and Smoky River/Jasper House, and those districts which were

Table 14: Migration patterns by birth, marriage and last residence for males in first marriage sample. Number in parentheses indicates number of cases considered.

Locality of residence or marriage	Married before 1885		Married after 1885		Total sample	
	% born in marriage locality	% born in residence locality	% born in marriage locality	% born in residence locality	% born in marriage locality	% born in residence locality
Lower Peace River	20% (5)	7% (14)	15% (13)	14% (14)	17% (18)	13% (30)
Upper Peace River	14 (22)	14 (22)	20 (15)	32 (19)	16 (37)	21 (43)
Smoky River/ Jasper House	20 (5)	50 (2)	27 (7)	100 (1)	25 (12)	83 (6)
Upper Athabasca	0 (0)	0 (0)	0 (1)	0 (0)	0 (1)	0 (0)
Lesser Slave Lake/ Lac la Bicho	55 (114)	57 (118)	68 (63)	69 (75)	60 (178)	62 (201)
Other Athabasca	27 (11)	22 (9)	28 (15)	33 (18)	27 (26)	31 (29)
Other Alberta	46 (223)	42 (268)	50 (22)	44 (18)	47 (245)	43 (299)
Saskatchewan	61 (156)	51 (195)	83 (18)	86 (22)	63 (174)	55 (236)
Assiniboia	17 (53)	8 (98)	38 (8)	20 (10)	21 (63)	10 (112)
Manitoba	70 (157)	75 (73)	52 (33)	61 (93)	67 (192)	67 (195)
North	52 (23)	79 (29)	73 (15)	91 (64)	61 (38)	87 (111)

Table 15: Migration patterns by birth, marriage and last residence for females in first marriage sample. Number in parentheses indicates number of cases considered.

Locality of residence or marriage	Married before 1885		Married after 1885		Total sample	
	% born in marriage locality	% born in residence locality	% born in marriage locality	% born in residence locality	% born in marriage locality	% born in residence locality
Lower Peace River	33 (6)	7 (15)	29 (17)	21 (19)	30 (23)	20 (40)
Upper Peace River	41 (22)	24 (17)	50 (22)	54 (28)	46 (44)	40 (47)
Smoky River/ Jasper House	43 (7)	67 (3)	25 (8)	50 (2)	33 (15)	80 (10)
Upper Athabasca	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Lesser Slave Lake/ Lac la Biche	72 (123)	63 (128)	62 (85)	53 (103)	68 (208)	58 (245)
Other Athabasca	40 (10)	44 (9)	61 (18)	41 (17)	54 (28)	39 (28)
Other Alberta	56 (282)	47 (385)	59 (34)	50 (28)	57 (317)	48 (457)
Saskatchewan	65 (208)	52 (267)	73 (33)	68 (37)	66 (244)	59 (512)
Assiniboia	27 (78)	16 (140)	36 (14)	53 (17)	28 (92)	26 (178)
Manitoba	73 (182)	68 (77)	63 (73)	66 (179)	70 (259)	66 (291)
North	60 (40)	76 (29)	64 (14)	83 (70)	62 (55)	80 (125)

only partly ascertained must be interpreted with caution.

A large proportion (greater than 40%) of the migration between birth and first marriage or last residence occurred within the boundaries of the major districts with the exception of Assiniboia. In the district of Assiniboia usually less than one-third of those married or living in the area had also been born there. With the exception of Manitoba, the proportion of people who were married or residing in their district of birth increased in the post-1885 cohort.

The neighbourhoods, including Other Athabasca, do not show such pronounced patterning. Only for Lesser Slave Lake/Lac la Biche are the majority of those married or resident in the area consistently born there. The Upper Athabasca is clearly an area without a stable population unit in the latter half of the nineteenth century. For the remaining neighbourhoods the proportions of those who are born, married and/or reside in the same area are usually much less than half; suggesting that considerable migration into and out of the neighbourhoods was common.

There is a general increase after 1885 in the proportion of males sampled who married or resided in their area of birth. For females the reverse pattern is observed for those married in Lower Peace River; residing in the Other Athabasca; and for those who married and/or resided at Smoky River/Jasper House and at Lesser Slave Lake/Lac la Biche. Overall, females in the first-marriage sample marry or reside in their birth area more frequently than is observed for males. The difference between sexes is, however, not very great for Smoky River/Jasper House, Lesser Slave Lake/Lac la Biche, the North, or Manitoba.

2 (b) Migration into NWHB neighbourhoods and districts.

A second method of analysis compares patterns of immigration into NWHB areas on the basis of the absolute numbers of males and females born in particular areas and moving or staying subsequent to marriage, or residing there at the time of the commission visit.

In Tables 16 and 17 the numbers in cells represent, in rank order, the absolute magnitude of the contribution of males and females who were born in the geographic areas indicated along the top of the table to those areas listed vertically along the left hand side of the table. Areas across the top of the table correspond to those in the left hand column with the addition of out-of-region localities 11 - 15. Manitoba and the "North" have been included because they were partially ascertained by the scrip commissions. The rank at which 50% or more of the sample size has been cumulated is enclosed within a square.

The diagonal values indicate that the highest proportion, if not the greatest number, of the members in the population of first marriages who were married or residing in the areas of Smoky River/ Jasper House, Lesser Slave Lake/Lac la Biche, Other Alberta, Saskatchewan, and the North were also born in these areas. This is true as well for females in the lower and upper Peace River neighbourhoods, and in Other Athabasca. The males in these areas have more frequently come from adjacent areas, the upper Peace River, Smoky River/Jasper House, and the North areas respectively; with the number of those who were born in the area ranking second.

Table 16: Migration into areas covered by NWHB scrip commission. Sample of first marriages for males.

**Birthplaces of people who married or resided in a NWHB area. Absolute frequencies of these two events have been added and then converted to rank order of immigration sources for each NWHB area.

11 = Manitoba 12 = British Columbia 13 = East 14 = United States
15 = Other continents

** NWHB area	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	Sample size
1. Lower Peace River	2	1	5		6	9	7	8		$\boxed{3}$	4					48
2. Upper Peace River		2	1		5	8	$\boxed{3}$			6	4		7			80
3. Smoky River/Jasper		3	1		4		$\boxed{2}$									18
4. Upper Athabasca							$\boxed{1}$									1
5. Lesser Slave Lake/Lac La Biche	11	7	6	9	$\boxed{1}$	8	2	4	10	5	3		13	14	12	379
6. Other Athabasca	6	4			7	$\boxed{2}$				1	3	5	8			55
7. Other Alberta	12	10	5	9	3	13	1	4	8	6	$\boxed{2}$		7	11		544
8. Saskatchewan		9	12		6	10	4	$\boxed{1}$	5	3	2		8	7	11	410
9. Assiniboia		7			6		5	4	2	8	$\boxed{1}$			3	9	175
10. North		8			5	7		3		$\boxed{1}$	2		6		4	149

Table 17: Migration into areas covered by NWHB scrip commission. Sample of first marriages for females.

**Birthplaces of people who married or resided in a NWHB area. Absolute frequencies of these two events have been added and then converted to rank order of immigration sources for each NWHB area.

11 = Manitoba 12 = British Columbia 13 = East 14 = United States
15 = Other continents

** / NWHB area	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	Sample size
1. Lower Peace River	1	$\boxed{3}$	8		4	5	6			2	7					63
2. Upper Peace River	5	1	$\boxed{2}$		4		3				6					91
3. Smoky River/Jasper		2	$\boxed{1}$		3											13
4. Upper Athabasca																0
5. Lesser Slave Lake/Lac La Biche	8	3	7	10	$\boxed{1}$		2	4	9	6	5	11				453
6. Other Athabasca	6				4	1	3	7		$\boxed{2}$	5					56
7. Other Alberta	12	8	5	13	2		$\boxed{1}$	4	6	7	3	10	11	9		774
8. Saskatchewan		8			6	10	3	$\boxed{1}$	5	4	2		7	9		756
9. Assiniboia		6	7		8		5	3	2	10	$\boxed{1}$		9	4		270
10. North		10	9		7	2	11	3	8	$\boxed{1}$	4	5	6			180

Assiniboia appears to have been virtually colonized by Manitoba, the majority of married males and females appear to be immigrants rather than residents from birth.

The overall tendency is for immigration to be from immediately adjacent neighbourhoods or districts for both sexes. As distance between localities increases the likelihood of immigration drops, with the exception of people coming from Manitoba who move into all but two out of the ten areas examined--Smoky River/Jasper House and the Upper Athabasca. As in the examination of migration patterns at birth, marriage, and last address, the upper Athabasca appears to be virtually an uninhabited region. People from Saskatchewan and Assiniboia and out-of-region localities other than Manitoba appear to have avoided travelling further north west than the Lesser Slave Lake/Lac la Biche neighbourhood.

The picture of migration derived from these data shows that native groups whose members applied for scrip in the late nineteenth century were far from being closed populations. Within the area covered by the NWHB commission populations are seen to exchange both males and females extensively, and long range migration occurs into all areas except Smoky River/Jasper House and the Upper Athabasca. While long range migration of people out of the study area no doubt occurred, the lack of adequate data bases from the out-of-region areas precludes analysis of this phenomenon.

2 (c) Analysis of endogamy rates for population of first marriages.

The third analysis of migration patterns measures the rates of endogamy for the total sample of first marriages with sexes taken separately and for the subset consisting of marriages in which both spouses have been ascertained. Endogamy as used here refers to shared geographical histories for mates, or the same locality of marriage as that of birth for sexes considered separately. Endogamy in the present sense does not provide a direct estimate of inbreeding. Since it is defined on the basis of proximity in geographical space rather than degree of biological kinship particular models would have to be chosen to relate one to the other. This has not been done. Also, the present method of coding the NWHB index of applicants does not permit control over the generational depth required in analysis of inbreeding.

For the present analysis, a first marriage in which both mates are known is endogamous if the spouses were born in the same locality (E_1). When sexes are considered separately (i.e. mates are not identified) endogamy exists if an individual has married in the same locality as that in which he/she was born (E_2). These definitions are illustrated in Figure 4.

Table 18 presents the results of an analysis of endogamy for first marriages considered separately by sexes and as married pairs. Because of the different information required of these two data sets--birthplaces for spouses and birthplace plus marriage locality for sexes taken separately--the samples are overlapping but not equivalent in size. Sample sizes for males and females with known marriage and birth localities are shown under the "Total sample" column in Tables 14 and 15.

Locational endogamy, E_2, for sexes considered separately is uniformly higher for females than for males, suggesting that the

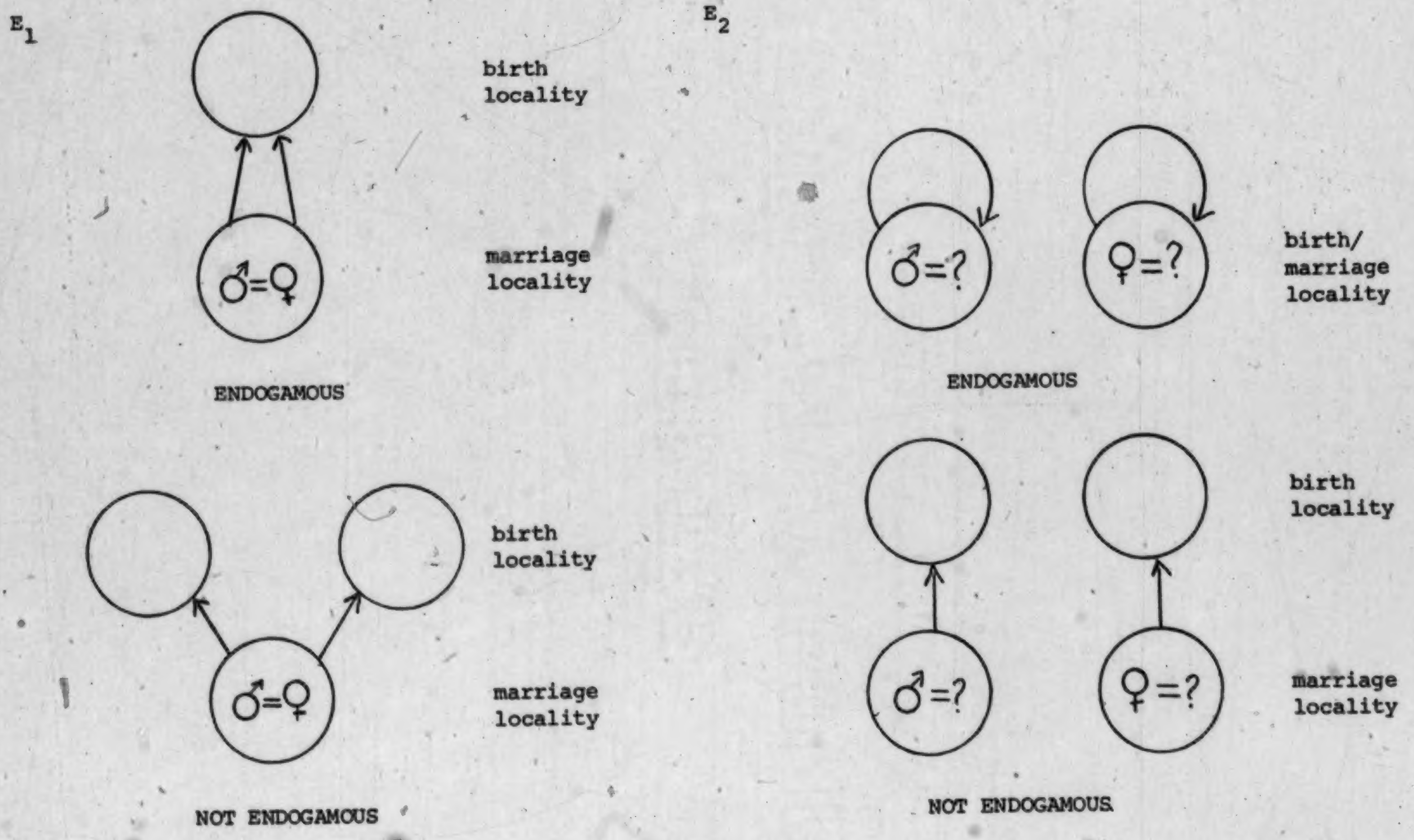


Figure 4: Definitions for estimates of endogamy.

Table 18: Endogamy incidence for population of NWHB first marriages.

(Sample sizes for males and females considered separately are indicated on Tables 14 and 15.

Neighbourhood or region of birth	Endogamy incidence for matched spouses*		Endogamy proportion by sex (%)	
	Sample size	Proportion (%)	Male	Female
Lower Peace River	18	6%	17	30
Upper Peace River	50	10	16	46
Smoky River/ Jasper	44	20	25	33
Upper Athabasca	6	0	0	0
Lesser Slave Lake/ Lac la Biche	209	32	60	68
Other Athabasca	32	9	27	54
Other Alberta	202	35	47	57
Saskatchewan	204	45	63	66
Assiniboia	44	25	21	28
North	146	48	61	62
Manitoba	305	44	67	70

* Endogamy = shared birth localities, E_2

** Endogamy = same birth and marriage locality, E_1

latter are the more mobile of the two sexes on marriage. Sample sizes for the first four northern neighbourhoods are small and results must be viewed with caution; however, they do seem congruent with the results shown for the larger districts. As in previous analyses, the upper Athabasca neighbourhood appears to be an area without any long term resident population. The low rates for Smoky River/Jasper House are misleading as they suggest 75% and 67% of the men and women respectively left their area of birth on marriage. More correctly, they temporarily left their area of birth to marry.[22] Native peoples in this area were converts to the Roman Catholic faith and placed importance on being married by a priest, which usually meant they had to go to missions either on the Upper Peace River or at Lac Ste. Anne or St. Albert in the Other Alberta district. The relatively low rate for Assiniboia may reflect movement out of that district by the local population.

Manitoba was included, even though it was not completely ascertained, because of the large numbers of people from that province who appeared in the NWHB files. The endogamy rates for males and females from Manitoba suggest about two-thirds of those who were married before migration westward had previously stayed close to the area of their birth.

The endogamy rates for matched spouses are much smaller than those for males and females taken separately, with the exception of the Smoky River/ Jasper House area and the North. An inference which may be drawn from this observation is that those who did marry in their area of birth were frequently choosing an immigrant for a mate in preference to another locally born person.

2 (d) Endogamy rates for individual settlements (See Map 7)

A limited examination of endogamy rates among first marriages in individual settlements is graphed in Figure 5. Only those settlements represented by ten or more marriages for each sex were included. Again females show a greater tendency to marry within their birth locality, with the exception of Lac Poisson Blanc (Whitefish Lake), Pakan (Victoria), Fort Pitt, and Carlton. One locality, Moose Lake, would appear to have an extremely mobile population in the period considered, with no one who was born in the settlement staying or returning there to marry.

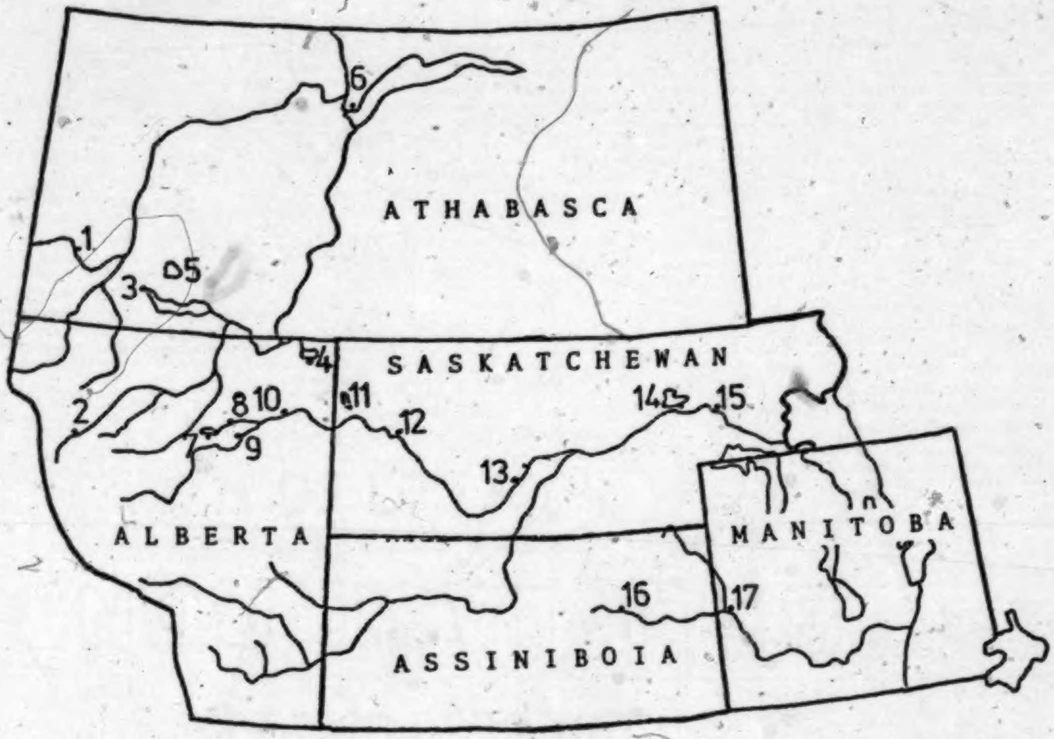
Localities with endogamy rates of near or greater than 50% were all mission centers about which large Metis populations gathered at least on a seasonal basis. One of the localities with an endogamy rate of over 70%, Fort Chipewyan, also is a geographically isolated community which would have promoted endogamy.

Lac Poisson Blanc lay within the sphere of Lesser Slave Lake before 1850. The low endogamy rates after 1850 suggest it continued to be closely associated in the period under study.

Discussion

The patterns of population distribution and migration observed for NWHB applicants reflect both lifestyles developed in the preceeding fur trade period and accomodations being made to new economic, political, and social influences between 1850 and 1900.

During the latter half of the nineteenth century the resources upon which native subsistence had long been based were destroyed or declining. The most dramatic change was the disappearance of bison



Settlement	Neighbourhood or District
1. Dunvegan	Upper Peace River
2. Jasper House	Smoky River/Jasper House
3. Lesser Slave Lake	Lesser Slave Lake/Lac la Biche
4. Lac la Biche	Lesser Slave Lake/Lac la Biche
5. Lac Poisson Blanc	Lesser Slave Lake/Lac la Biche
6. Fort Chipewyan	Other Athabasca
7. Lac Ste. Anne	Other Alberta
8. St. Albert	Other Alberta
9. Edmonton	Other Alberta
10. Pakan or Victoria	Other Alberta
11. Moose Lake	Saskatchewan
12. Fort Pitt	Saskatchewan
13. Carlton	Saskatchewan
14. Cumberland House	Saskatchewan
15. Le Pas	Saskatchewan
16. Fort Qu'Appelle	Assiniboia
17. Fort Ellice	Manitoba

Map 7: Locations of settlements analyzed in Figure 5.

(Territorial Districts are shown as of 1901.)

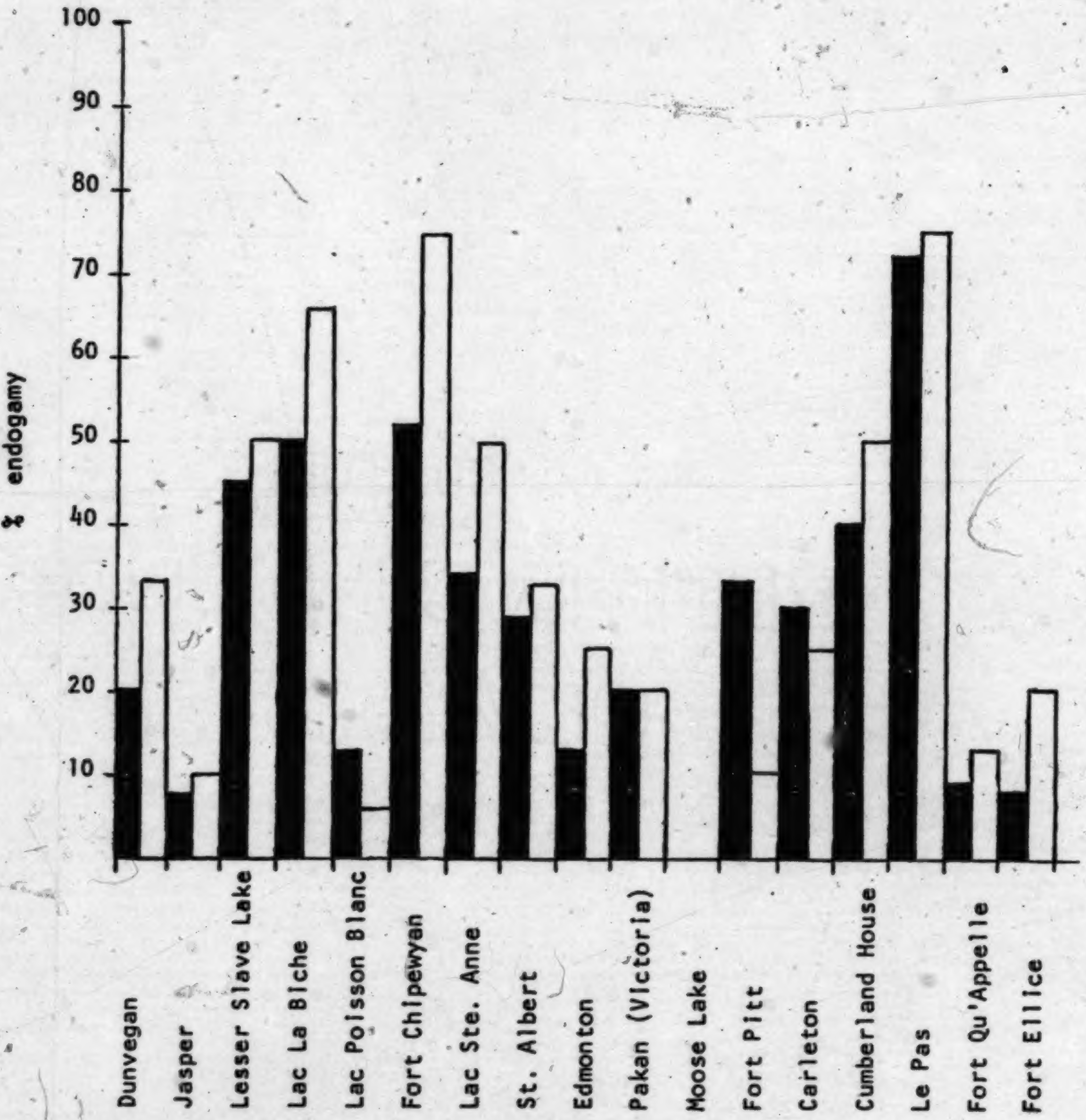


Figure 5: Endogamy rates for sample of first marriages by individual settlements.

Rates are measured separately for males (■) and females (□) for those settlements represented by 10 or more marriages for each sex.

Endogamy is defined as having the same birth and marriage locality.

from the northern plains, an event which had occurred by 1879 in Canada and by the early 1880's in the northern United States. In large measure because of the economic distress which ensued, the Indian populations of the northern plains and adjacent parklands signed Treaties 4, 6, and 7 with the Canadian government. Through Treaty they obtained economic assistance and began to learn new subsistence techniques, particularly farming and stock raising.

The demise of bison herds also destroyed the lifestyle of the smaller Metis population in the Districts of Alberta, Assiniboia, and Saskatchewan; and the Province of Manitoba. Unlike the Indians, however, most of these people did not receive the continuing support which Treaties provided for Indians while adopting a new lifestyle. As the bison declined on the northern plains the NWHB hunters could follow the herds south into the United States; turn more fully to agriculture assisted by missionary instruction and irregular government aid; find wage labour in occupations such as freighting; or, with the aid of money realized from the sale of scrip certificates, move on to areas not yet burdened with settlement where they could continue hunting and trapping.

The first and last options are clearly represented in the NWHB scrip applications. Many applications were filed by residents of the United States, particularly Montana, who had migrated to the States after 1870. Analysis of movement patterns of married individuals suggest that after 1885 Metis became more mobile in the three southern Districts; that is, fewer of them were married or resided in their area of birth. The population of these Districts in the late nineteenth century was made up of people from a wide area. Emigrants from the southern Territories and Manitoba are found throughout the northern areas indicated in Tables 16 and 17, with the exception of two neighbourhoods which are discussed below, again suggesting mobility was high among Metis populations. Methods of analysis used in the present study do not permit documentation of the remaining two options from NWHB scrip records; however, other historical records indicate such lifestyles were also adopted by Metis peoples.

North of the plains the shift in the subsistence base was less dramatic. The addition of commercial fur trapping to hunting and gathering had taken place in the previous century. Game animals were becoming scarce in the late nineteenth century, however; and starvation was not unknown.[23] Other resources were available to dwellers in the northern forests, particularly fish; and, on a seasonal basis, wildfowl and berries. But as European settlement increased there was competition for, and sometimes exhaustion of, the fisheries which supplied a most important part of native subsistence.[24] A limited variety of food supplies brought in by trading companies could be purchased using credits received for fur hunts or through labor as freightors and boatmen.

A change to farming was less feasible in the north because the climate and much of the land, with the exception of areas in river valleys or about major lakes, were unsuited to agricultural crops and practices available at the time. Root crops were grown in gardens at missions and posts; but as far as native people were concerned, cultivation was usually undertaken as an adjunct to, rather than a replacement of, the more traditional hunting and trapping lifestyle. Bishop Lefleche (Canada. Report of Select Committee of the Senate, 1888:228) described the combined lifestyle in the mid-nineteenth century:

> The half-breeds and the Indians love to gather about the mission where they built a house, and cultivate a small field to assure their families a living during their hunting expeditions.

The pattern described for Isle a la Crosse by Bishop Lefleche was also reported for other areas such as Lesser Slave Lake and Sturgeon Lake in the District of Athabasca.[25]

Among the Europeans present in the north in the second half of the nineteenth century there were competing interests with regard to directing the subsistence activities of native peoples. The clergy saw cultivation of gardens (at the least) as a way to provide an assured food supply; and, incidentally, to tie the population to an area of settlement where the work of missionizing could be more readily achieved. The fur trade was still a viable industry with the Hudson's Bay Company again facing competing companies. Since the traders required a supply of meat and furs from the local native population they favored nomadic hunters and trappers.[26]

Neither European interest gained a clear control of the northern populations in regard to subsistence patterns. Nomadic hunting, trapping, and gathering pursuits remained important; and in fact, the return to competing fur companies again gave the natives some freedom of choice in where they would sell furs. Missionaries did gain religious converts but were mainly only able to attract seasonal settlement about the missions, which became the foci of spring and fall ingatherings.[27]

Given a greater degree of continuity with a pre-1850 subsistence base it might be expected that population distribution and migration patterns would remain less changed in the north. Serious government intervention in the form of Treaties and scrip did not affect the populations of the District of Athabasca and northern parts of the District of Alberta until 1899. There are several indicators in the analysis of NWHB scrip applications for continuity in demographic patterns for northern populations after 1850.

The analysis of migration into the five neighbourhoods, the "Other Athabasca", and "North" districts shows the population to be derived from relatively fewer outside sources than is the case in southern Districts. The majority of population in each neighbourhood or district is derived locally or from immediately adjacent areas. Although sample sizes are unfortunately small in some cases, the proportions of married females and males who marry and remain in their birth locality is high for five of the seven areas analyzed in the north, and there is a tendency for the proportion to increase after 1885. Furthermore, a comparison of surnames present in the five neighbourhoods studied before and after 1850 indicates that the NWHB scrip population was derived largely from the Freeman populations which developed in the areas during the fur trade.[28]

The NWHB sample of first marriages in the Smoky River/Jasper House neighbourhood includes no long range immigrants subsequent to the formation of the population. Other historical documents lend support to this finding, identifying the population occupying the area in the latter nineteenth century as descendants of the Iroquois Freemen who had established themselves in the region during the fur trade period (see Chapter II). Their close ties to the Edmonton, St. Albert, and Lac Ste. Anne areas of Alberta in this period are shown by their rank of fifth among twelve regions contributing to the "Other Alberta" districts (see Tables 16 and 17). The missions at Lac Ste. Anne and St. Albert, and the growing commercial center at Edmonton, were major religious and trading centers for the eastern slopes population.

A dearth of population in the Upper Athabasca area is revealed by all analyses of the NWHB scrip applications. Before 1850 the area was not a major center of Freemen occupation. The closure of Fort Assiniboine on the Athabasca River in 1877 removed the main incentive for anyone to hunt and trap in the region. The Assiniboine who had occupied the region before 1850 were dispersed to areas closer to Edmonton or further south along the foothills by the time of Treaty and scrip commissions.

The Lesser Slave Lake/Lac la Biche neighbourhood stands out as having a Metis population significantly larger than the local Indian population (1,055 to 480) or any of the other neighbourhoods, and one which had increased greatly over the pre-1850 Freeman population which contributed to its founding. Although over 50% of the population enumerated by the scrip commission was derived locally, it also included immigrants from fourteen outside regions. Males in particular had emigrated over long distances from Manitoba, eastern Canada, the United States, and more rarely the British Isles. The attraction of the region to immigration included its nearness to the southern Territorial Districts and its rich resources of fish and furs upon which a traditional lifestyle could be maintained. The continuity of population between Lesser Slave Lake and Lac la Biche breaks down in the period considered, as indicated by the high proportion of males and females remaining in each community from birth through marriage (See Figure 5).

Viewing the five neighbourhoods from a century-long perspective, some interesting comparisons arise between pre- and post 1850 patterns. Long range migration is evident for both periods; and very long range migration, from across the continent and across the Atlantic ocean, is more common in the fur trade period. After 1850 the frequency of very long range migration is considerably reduced, and population exchange is predominantly within the Canadian west.

In both periods males appear to have been more mobile than females. Since there was continuity between pre- and post-1850 subsistence patterns, it is likely that males continued to move into the hunting and trapping groups of in-laws throughout the century. The low incidence of spouses coming from the same area after 1850, compared with the proportion of men and women who marry in their area of birth, suggests immigrants to an area were often selected as mates. Projected onto the previous half-century such a preference would help to explain the ready acceptance of immigrant males as marriage partners during the fur trade period.

The NWHB applications reveal more than demographic response to changing subsistence patterns. Some of the migration between Districts of the North West Territories represents a response to political strife experienced by the Metis populations in dealings with the Canadian government. As Tables 16 and 17 show, Manitoba Metis formed a significant portion of the population in the Districts of the Canadian North West. The ties between the west and Manitoba were founded early in the nineteenth century when employees of the fur companies began retiring to the Red River settlement. Later in the century Red River Metis journeyed to the western plains, where they might spend several years before returning to Manitoba. Metis rebelled in protest of the manner in which Manitoba was acquired by Canada in 1869; and in the ensuing years, dissatisfied with the new political and economic order, many left in a series of migrations for the prairies and parklands of the North West Territories, where they hoped to continue their traditional lifestyle. In the Territories they expanded the populations about missions established by the Oblate Fathers (Sealey and Lussier 1975; Giraud 1945).

In 1885 Metis and some Indians again rebelled against government policies over many of the same issues, but this time the unrest was centered in the District of Saskatchewan. Again the rebellion and its unsuccessful conclusion precipitated a migration of people away from the troubled area. The distribution of Saskatchewan Metis in the NWHB sample of first marriages indicates migration was to the westward (Alberta; Lesser Slave Lake/Lac la Biche); the north (North; Lower Peace River; Other Athabasca) and the south (Assiniboia

Those going north and west would have had some opportunity to pursue preferred lifestyles and escape, for a time, the pressures of encroaching European settlement which threatened to dispossess them of lands from which they made their living. The magnitude of migration may in fact be underrepresented by applications made to the NWHB commission, as participants in the 1885 rebellion were supposed to have been denied scrip. It is not clear from Department of Interior documents consulted how the rebels were to be distinguished from non-participants. The commission certainly visited and took applications at settlements which were centers of the rebellion, for example, Batoche and Duck Lake.

In addition to economic and political influences, increased missionary activity in the west did effect Metis demographic patterns. Missionary efforts to end nomadic habits through the introduction of new subsistence techniques were not particularly successful, especially in the north; but the religious beliefs they instilled did influence patterns of population movement and association. The Roman Catholic Iroquois descendants in Smoky River/ Jasper House incorporated the mission centers of St. Albert and Lac Ste. Anne into their annual summer in-gatherings, for example. And it was largely the difference in Christian faiths which precluded intermarriage between some of the Metis settlements in the North West Territories; for example, between Roman Catholic Lac Ste. Anne and Protestant Victoria which were about 100 miles apart.[29]

Finally, diseases continued to cause high mortality rates in native populations between 1850 and 1900. Smallpox, measles, "consumption" and "scrofula" (varieties of tuberculosis), whooping cough, and influenza are reported in both Indian and Metis populations across western Canada for this period. Inadequate sanitation was cited as a contributing factor in some cases, and the periods of starvation reported for the north must also have reduced resistance to diseases.

Mortality rates for Metis have not been estimated although they were obviously high in some populations, as the reference to 1870 smallpox tolls at St. Albert on page 73 indicates. One interesting case of a shift in the balance between Metis and Indian populations in a neighbourhood appears to be the result of high mortality rates for the Indian group rather than great expansion through natural increase or immigration for the Metis population. Before 1850 the Indian population on the upper Peace River outnumbered the Freeman population by a range of 298-526 to 29-76. Population estimates for the 1850-1900 period show the Indian and Freemen descendant populations to be of roughly similar size (207 to 218). Several European observers reported the decline of the Beaver Indians in the late nineteenth century, of which one example from a Hudson's Bay Company inspection report for Fort Dunvegan in 1891 is cited.

> The Beaver Indians of this Post are disappearing very fast. In the last five years more than half of then (sic) died and very few children are growing up. They are highly scrofulous and consumptive, and for a few years back suffered severly from starvation. Between this Post...and Grande Prairie Out-Post ...there remain only 25 hunters (men and boys). The rest of the hunters resorting to the Post are Crees, Iroquois, and Half-breeds, numbering 21 hunters. They are generally strong

> and vigorous, but owing to the scarcity of game, experience great difficulty in procuring sufficient food for themselves and families. (HBA:B.56/e/4).

In instances where effective European medical aid was readily available, major mortality was sometimes averted.[30] But it is not unreasonable to expect that native populations weakened by disease and loss of numbers would have become concurrently less able to sustain a traditional lifestyle and more susceptible to the influence of those agencies which were interested in bringing about a new social and economic order for the indigenous populations of western Canada.

How did Metis demographic patterns compare with those for Indian populations in the North West Territories between 1850 and 1900? Equivalent analyses have not been carried out for Indian populations, but some general observations are possible regarding Indian migration patterns. The Treaties signed by Indians promoted farming and stock raising as the new economic order, and considerable government assistance was provided to ensure a successful transition. Logically such a situation would promote a sedentary pattern of settlement.

The introduction of agriculture on reserves did not bring about immediate self-sufficiency. By 1891, the Superintendent-General of Indian Affairs still had to report that the Indian people of Assiniboia, Saskatchewan, and parts of Alberta were largely dependent on the government for support (Canada. Indian Affairs Annual Report for 1890:x). There was an obvious disinclination on the part of many Indians to give up their nomadic past. In annual reports, Indian agents as a matter of policy stressed the progress being made in agricultural pursuits. For example, in 1877, agents in the District of Assiniboia optimistically reported

> ... the Indians seem more contented to stay at home on their reserves, and they take a greater interest in the work on their farms than they did in former years; the desire to roam is gradually leaving them. (Canada. Indian Affairs Annual Report for 1877:lxiiii).

In fact, band census statements accompanying the annual reports into the 1890's indicate that a number of band members were usually absent from the reserves--on hunting, fishing and visiting excursions such as had characterized pre-reservation days (see for example Canada. Indian Affairs Annual Report for 1890:205-210).

In the north there was also a prejudice on the part of Indians against adopting cultivation. Among the residents of the Treaty 5 area attempts to introduce gardening met with little success, in part because of poor soil, and in part because natives were "indisposed to adopt husbandry as a means of obtaining livelihood" (Canada. Indian Affairs Annual Report for 1889:xxvi-xxvii).

Treaties therefore did not mean that Indians quickly became a sedentary people. For the period under consideration much population movement within and between Indian populations was no doubt masked by accounting procedures of the Department of Indian Affairs, and the difference in population mobility between Indian and Metis populations was probably in part a matter of appearances rather than reality.

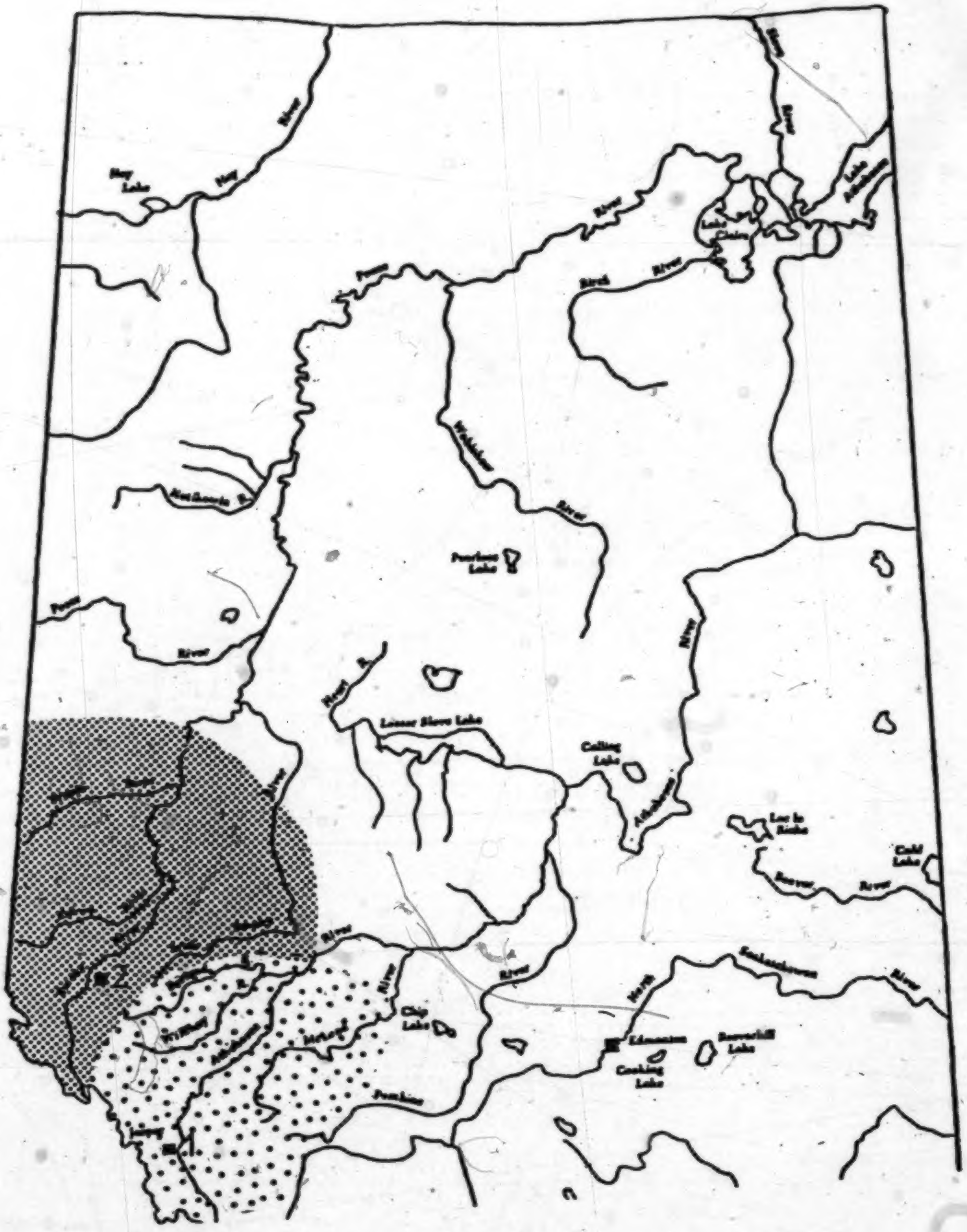
CHAPTER IV

HISTORICAL DEMOGRAPHY OF THE GRANDE CACHE NATIVE POPULATION, 1800-1975

The historical demography of a native population which today is centered about Grande Cache in west-central Alberta (Map 8) be presented for the period from ca. 1800 to 1975. Throughout the nineteenth century the population was part of the Smoky River/ Jasper House neighbourhood previously identified through fur trade and North West Half Breed (NWHB) scrip commission documents.

Until the mid-twentieth century the Grande Cache area was mainly uninfluenced by the agricultural and industrial development taking place in regions beyond the eastern slopes of the Rocky Mountains. Native families in the area lived mainly by hunting and trapping, and only occasionally took wage labour in adjacent regions. In the late 1960's urban and industrial development came swiftly to Grande Cache in the form of large scale coal mining operations and an instant modern town housing imported miners and their families. The native population has since been making a transition to a subsistence pattern based on wage labour and close proximity to an urban environment.

Although non-literate and geographically remote for most of its history, the native population of the Grande Cache area can be observed from its founding early in the nineteenth century through documents left by fur traders, missionaries, explorers, and surveyors;



⁙ 1. Jasper area ▩ 2. Grande Cache area

Map 8: Northern Alberta showing location of Grande Cache and Jasper areas.

and after 1870, through a variety of government records. Two of these sources have provided extensive nominal records[31] for the population in the nineteenth and early twentieth centuries; namely, Roman Catholic parish registers and the North West Half Breed scrip applications. Nominal record linkage therefore presented a promising method for constructing a data set covering the ancestral population.[32] The data were extended to the present (1975) by linkage to genealogies provided by native informants from Grande Cache and related populations during field work between 1973 and 1975.

To date little work on the demography of Canadian native populations has been reported covering an equally long time span. The present study is therefore of interest not only for the results of analysis, but also as an investigation of the variety and temporal scope of data available for studies of historical demography of native populations. The Grande Cache population specifically is of interest because the hunting and trapping lifestyle which persisted there until recently was typical of many other Canadian native populations in the post-European contact period.

History of the Grande Cache Area[33]

Archaeological evidence indicates that there was human occupation of the Grande Cache area as early as 5,000 to 1,500 years BP (Brink 1978:5). There has, however, not yet been sufficient archaeological work to determine whether the area was inhabited on a continuous or seasonal basis, or whether it was abandoned totally for long periods of time. Earliest written records left by fur traders identify the inhabitants of the Grande Cache area as

Freemen and Iroquois, that is, immigrants from the east who came west with the fur traders themselves. By 1819, and probably a decade or even two earlier, these Freemen and Iroquois were hunting and trapping in the mountainous region about the upper waters of the Smoky River (Nicks 1979, 1980).[34]

The fur trade records suggest that the area was not rich in game, a factor which may well explain why immigrant trappers did not encounter an indigenous population at the beginning of the nineteenth century. There were sufficient fur bearing animals, however, to attract year round occupation of the area by a small number of trappers. In 1822-1823 the Hudson's Bay Company attempted to persuade the 58 Freemen about Lesser Slave Lake to move into the region between the upper Athabasca and Smoky Rivers, where beaver were "tolerable numerous," but they had little success (HBA:B115/a/6). Only five men actually left for the area; the rest were content to remain in areas where food supplies were more certain.

Except for the winter of 1821 - 1822, when an outpost was situated on the upper Smoky River, the furs obtained in the Grande Cache area had to be traded for supplies at posts considerable distances away. Several posts were visited at different points throughout the nineteenth century: Dunvegan on the upper Peace River; Lesser Slave Lake; Jasper House and Fort Assiniboine on the upper Athabasca River; Lac Ste. Anne near Edmonton; and occasionally late in the century, Kamloops on the west side of the mountains.[35] In their seasonal trapping and trading rounds people from Grande Cache thus came into contact with other native groups over a wide area of west-central Alberta. Very likely, economic and marital alliances resulted from these contacts. In fact, during the nineteenth century fur trade accounts refer to Freemen and Iroquois in the area between Jasper House and the south side of the Peace River as if they were members of the same regional band.

By mid-century, Roman Catholic missionaries had contacted members of this band at Jasper and at a mission established in 1842 at Lac Ste. Anne near Edmonton. The Iroquois element of the population, at least, had strong ties to the Roman Catholic religion, having come from mission villages in eastern Canada. The mission became an important focus of summer activities for the trappers of Jasper and Grande Cache, and some families even opted to settle permanently at Lac Ste. Anne. Although priests were travelling more frequently to the Jasper area by the end of the century, the presence of relatives at Lac Ste. Anne, the introduction of an annual July pilgrimmage in honor of St. Anne in the 1870's, plus the proximity of a major commercial center at Edmonton, still provided sufficient incentive to attract summer visits by people from Grande Cache and Jasper into the twentieth century (Drouin 1973).

Several explorers visited the eastern slops of the Rocky Mountains in the nineteenth century, but the record left by C. J. Hannington of his explorations for the Canadian Pacific Railway in the winter of 1874-1875 is of interest because it reflects, through negative evidence, the nomadic subsistence pattern of the local native population (PAC:MG12 B2). Hannington travelled from the Peace River south through Grande Cache area all the way to Jasper before seeing either game or native people. He nearly perished on the journey. Obviously the native population had dispersed to areas where game was available when he passed through.

It was the close connection with Lac Ste. Anne which provided people from Grande Cache and Jasper with access to the benefits of the North West Half Breed scrip commission in 1885 and subsequent years. While at Lac Ste. Anne during the summer months they appeared before the commission to apply for scrip. Most of the successful applicants sold their scrip certificates for cash rather than using them to start homesteads. When fall approached they returned to the eastern slopes of the Rocky Mountains to continue hunting and trapping as in previous years.

The Jasper area began to experience significant encroachment by the outside world with the arrival of the Grand Trunk Pacific Railroad in the summer of 1911. In conjunction with the building of this railroad, a large area around Jasper was set aside as a national park; and those native families "squatting" within its boundaries were evicted.[36] Some moved to Entrance just outside of the park, while others moved further north to the Grande Cache area.

Initially these developments at Jasper did not alter the seasonal cycle of the past century. Families from Grande Cache to Entrance still dispersed to traplines in the winter months and congregated at camps on the eastern slopes or at Lac Ste. Anne in the spring and summer. But some changes in the old way of life began to appear. Wage labour was now available on survey and construction crews associated with the building of the railroad, and the development of tourism in the national park opened job opportunities as guides on outfitting parties. The trip to Lac Ste. Anne became considerably easier by train than had been the case when a pack trip of up to fifteen days from Jasper was required.

As the Jasper area experienced increasing settlement and development by non-native people those native families wishing to continue hunting and trapping, and controlling their own affairs in general, retreated toward Grande Cache. In the first half of the twentieth century Grande Cache largely retained the lifestyle of the previous century, while at Jasper the old pattern was supplanted by the European-dominated society. During this transitional stage many native people in both areas fell victim to the 1918-1919 world-wide epidemic of influenza.

By mid-century the outside world began major encroachments into the Grande Cache area (Van Dyke and Scambler 1973:160-181). In 1947 a motor vehicle road was constructed from Entrance to a wildcat oil well at Muskeg River. In 1959 this road was connected to the forestry road which had been built southward from the Grande Prairie area. These roads replaced the old pack trails, and travel to commercial centers both north and south of Grande Cache became much easier. The roads also facilitated travel by outsiders into the Grande Cache region, and contacts with people such as forestry officials increased in frequency and duration.

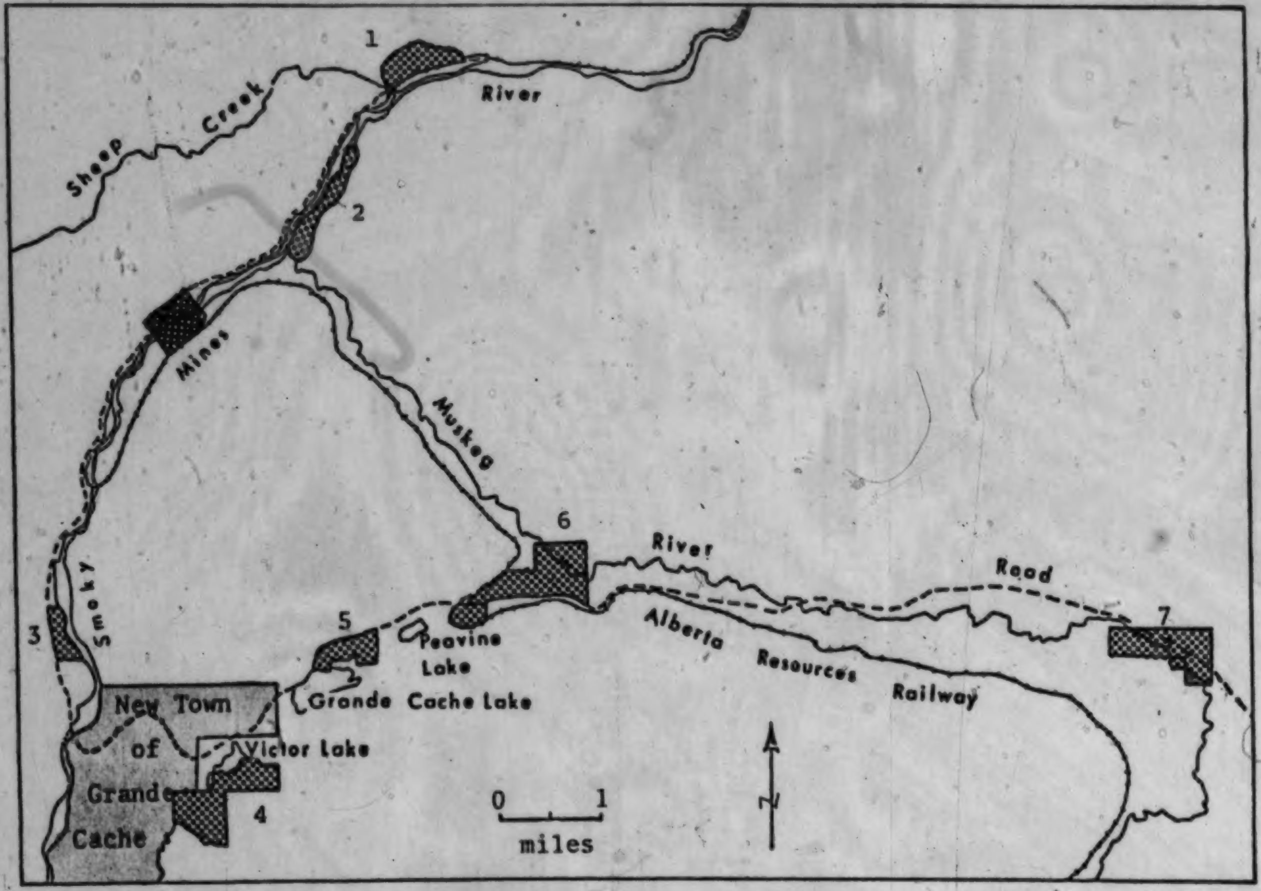
In 1958 a school was introduced on a part time basis at Muskeg, one of the native settlements about Grande Cache. In 1961 the school was opened on a full time basis. Small "general" stores operated at some of the native settlements from early in the century.[37]

Major industrial encroachment began with the building of the Alberta Resources Railway in 1966, and received added impetus in 1968 when coal companies in the area contracted to supply thirty million tons of coal to Japan over a fifteen year period. Skilled miners were imported from Great Britain and the Maritime provinces, and in 1969 construction began on a modern town to house these immigrants. The New Town of Grande Cache was built in the middle of the existing native settlements (Map 9). With its construction a wide range of stores, wage labour opportunities, and modern medical facilities became available virtually on the doorsteps of the native population.

The basic native settlement pattern at Grande Cache remained superficially the same as it had been early in the century; namely, a series of small family groupings located several miles apart along the Muskeg and Smoky Rivers and about local lakes. But free movement throughout the area, as was typical before 1969, has been curtailed as urban and industrial growth overtake traplines and force game animals away from the area.

In 1972, the Provincial government awarded the native people at Grande Cache 4,150 acres of land to settle claims to aboriginal title in the area. The grant included little more than the traditional living sites, which are inadequate alone to support a hunting and trapping lifestyle. A further complication arises from the fact that these lands are to be subject to property taxes after a few years.

As the hunting and trapping resources disappear, the need



1. Wanyande Flats
2. Wanyande or Daniel's Flats
3. Joachim Flats
4. Victor Lake
5. Grande Cache Lake
6. Susa Creek
7. Muskeg

Map 9: Grande Cache native settlement areas occupied in 1975. (After Nicks 1974) for money to pay for food, shelter, clothing, and ultimately taxes, increases. These circumstances have led the native population to enter the local wage labour market. Jobs are mainly found in the mining industry and a local small-scale logging company, although a few individuals work in the town or for Alberta Government Highways. As hunting and trapping are replaced as the basis of subsistence the traditional seasonal migration patterns have all but disappeared. The last remaining vestige, the annual pilgrimmage to Lac Ste. Anne in July, now lasts exactly the four days required for travel and participation in the event, rather than being part of a summer ingathering of several weeks duration.

In the 1970's the Grande Cache native population was less nomadic than it once was, even though transportation facilities in the area are vastly improved. As they adopt a new lifestyle based on the urban and industrial development in their home area they appear to have fewer contacts with related native populations at Lac Ste. Anne, at Jasper, and at Grande Prairie to the north. These changes are unfortunately accompanied by extensive social disruption in the native community (Morrison 1977).

THE GRANDE CACHE/JASPER DATA BASE

Sources

Demographic data on the native population of the Grande Cache/Jasper area were gathered from historical documents and by informant interviews. Archival documents include fur trade records in the Hudson's Bay Company archives and the applications for North

West Half Breed scrip from the Public Archives of Canada described in previous chapters.[38] In addition, data were gathered from parish registers in the Oblate Provincial Archives housed at the Provincial Archives of Alberta and at the Edmonton Archdiocese office of the Roman Catholic church. The parishes considered are Fort des Prairies (North Saskatchewan River), Lac Ste. Anne, St. Albert, and St. Joachim (Edmonton).[39] In addition to these registers, vital events information was collected from cemeteries at Edmonton, Lac Ste. Anne, Villeneuve, St. Albert, and Entrance, Alberta. Further details regarding the population came from a wide variety of published sources.[40] Demographic information was also obtained from members of the Grande Cache and related populations at Entrance and Long Lake, Alberta, in a series of summer and fall visits made to these areas between 1973 and 1975.[41]

Scope of Nominal Records

The relative contributions made by the three main data sources---Roman Catholic parish registers, government documents, and field interviews---to the Grande Cache/Jasper data base are graphed in Figure 6. The graph is based on numbers of vital events ascertained rather than individuals. All vital events identified for an individual have been allocated to his or her birth cohort. The count of 1,277 vital events includes eleven ante-natal deaths which are scored as both births and deaths. One ante-natal death is reported between 1875-1899, four between 1925-1949, and six between 1950-1975.

From Figure 6 it can be seen that the three sources of information used are each limited to a portion of the total time

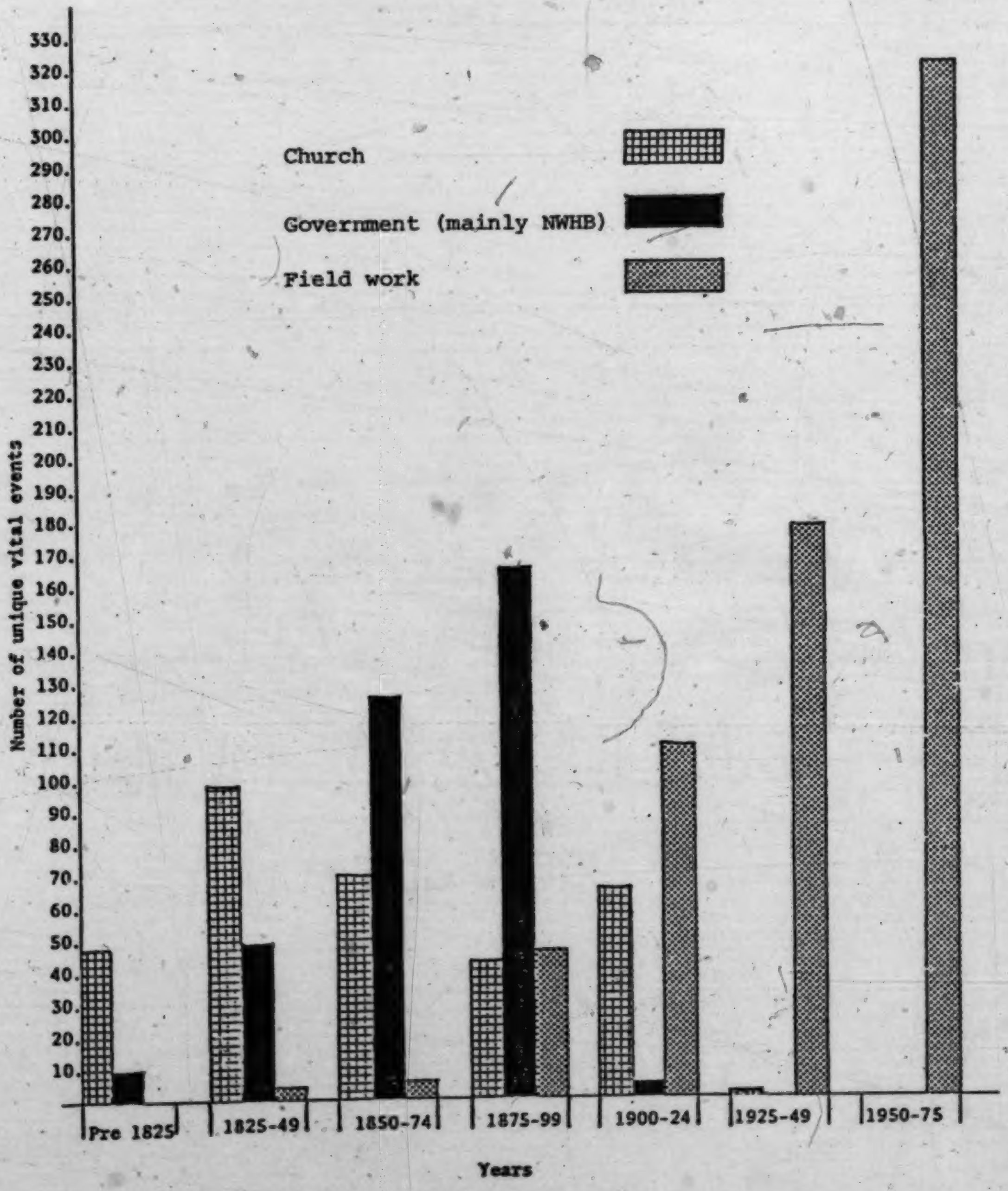


Figure 6: Distribution of 1,277 vital events by birth cohorts for 928 individuals from the Jasper/Grande Cache area.

span considered. Church registers do exist for the entire time span, but practical considerations made it necessary to limit research on these records for the present study. The government documents are limited in time depth because the NWHB commission sat only from 1885-1901. It did enumerate people who lived previous to this period, but they either had to be alive to appear before the commission or had descendants or relatives to do so on their behalf. Recall data drops sharply in completeness and accuracy after approximately two generations.

The data sources are limited not only in time span, but also differ in the perspective they provide of the historical population of the Jasper and Grande Cache area. Church records identify only those native people who participated in the Roman Catholic church. The NWHB records include only those members of the Jasper and Grande Cache population who were in the Edmonton area while the commission was sitting and who took the trouble to appear before the commission.

Since one of the important attractions of the Edmonton area for native people from Jasper and Grande Cache was the Oblate mission at Lac Ste. Anne, it is important to investigate the degree of overlap between church and government records. Table 19 compares these two sets of records to determine the extent to which they enumerated the same people. The overlap between the records is only 13%, suggesting that the government records are not limited by having access only to that portion of the population which was Roman Catholic. There were obviously other than religious interests drawing people from the eastern slopes to the Edmonton/

Table 19: Distribution of 430 individuals from pre-1900 birth cohorts ascertained in church and/or NWHB scrip records.

		NWHB		
		+	-	
Church	+	54	179	233
	-	197	—	
		251		

Lac Ste. Anne area in the nineteenth century.

Recall data obtained by interviewing living informants converges on fewer and fewer individuals as one goes back in time because of reliance on family lines currently or recently represented by descendants living in the area. Those families or individuals who may once have lived in the study area but have since migrated leaving no descendants in the current population may be forgotten. Using multiple sources of information provides some opportunity to identify these other members of the population in the past. Additional information may be obtained from research outside of the immediate study area to ascertain emigrants. The advantage of a body of data with wide geographical range such as the NWHB scrip applications is evident in this context. From commission records, for example, it was possible to identify the Collins family from Montana as having been resident in the Jasper area in the mid-nineteenth century although they have no descendants in the recent population in the area.[42]

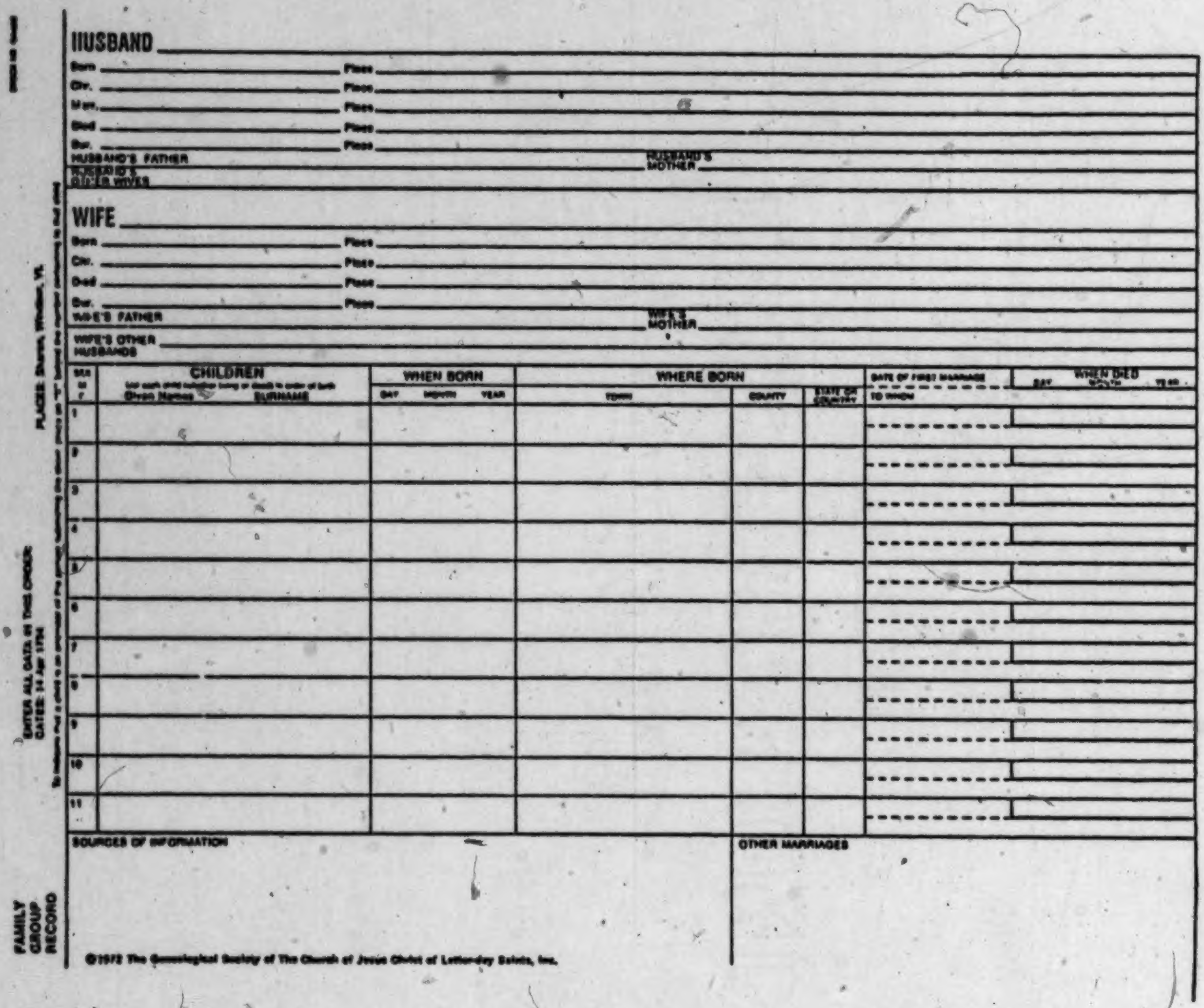
In all historical data sources individuals who die young are not likely to be enumerated. Even when the wife and mother is beyond child-bearing age, family data will be incomplete because records of still-births and infant or childhood deaths may be missing. In fieldwork it is usually necessary to specify that one wishes to know about deceased as well as living offspring, and even then their numbers might be under-represented through forgetfulness or reluctance to remember unhappy events. At Grande Cache a major informant had been a midwife prior to the building of the local hospital, and she was able to fill in at least partially the incidence of ante-natal and infant mortality in the recent population.

The reconstruction which each data source provides of the historical population in the Grande Cache/Jasper area is determined by its time span and by different requirements for ascertaining any member of the contemporaneous population. These constraints must be borne in mind when interpreting the results of historical demographic analyses.

Organization of Data

Demographic data from historical documents and field notes and genealogies were entered on family record sheets developed by the Church of Jesus Christ of Latter Day Saints (see Figure 7). The final data base consisted of 1,277 vital events for 928 individuals, all but six of whom could be placed in 173 nuclear families. A record containing all available vital events information was prepared for each individual in the sample. These records were hand sorted for analysis.

In organizing the data problems were encountered with regard to the identification of locations and dates for vital events and in deciding whether or not a match was achieved between different nominal records. The assignment of vital events to a specific location was particularly a problem in parish registers. Nineteenth century missions often covered large areas; for instance, the Fort des Prairie parish register included events recorded from Fort



FAMILY
GROUP
RECORD

ENTER ALL DATA IN THIS ORDER:
DATES: 14 Apr 1794
PLACES: Sharon, Windsor, Vt.

HUSBAND

Born ____ Place ____
Chr. ____ Place ____
Mar. ____ Place ____
Died ____ Place ____
Bur. ____ Place ____
HUSBAND'S FATHER ____ HUSBAND'S MOTHER ____
HUSBAND'S OTHER WIVES ____

WIFE

Born ____ Place ____
Chr. ____ Place ____
Died ____ Place ____
Bur. ____ Place ____
WIFE'S FATHER ____ WIFE'S MOTHER ____
WIFE'S OTHER HUSBANDS ____

SEX M F	CHILDREN Given Names	SURNAME	WHEN BORN DAY	MONTH	YEAR	WHERE BORN TOWN	COUNTY	STATE OR COUNTRY	DATE OF FIRST MARRIAGE TO WHOM	WHEN DIED DAY	MONTH	YEAR
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												

SOURCES OF INFORMATION

OTHER MARRIAGES

©1972 The Genealogical Society of The Church of Jesus Christ of Latter-day Saints, Inc.

Figure 7: Family record sheet.

Carlton in Saskatchewan to Jasper House in Alberta. Unfortunately, the missionaries often recorded events from a wide area in their registers without noting the specific locality involved in each case.

When an individual could be assigned to a family, then information for other family members often indicated a locality or localities in which the person resided, at least while still a part of that nuclear family. But given the mobile lifestyle of native populations at the time, the assumption that an individual was born at the same locality as one or more of his siblings might well be in error. Unless a clear case could be made for assigning an event to a locality, the information with regard to location was considered as missing for purposes of analysis. As a result, sample sizes for migration analyses were reduced.

Dates for vital events could be missing in church records, especially where baptism occurred some years after birth; but the problem also occurred in government documents and informant recall. As the NWHB commissioners found, there is a tendency for native informants to indicate births of children at two year intervals, a custom which, unless carefully checked, can give erroneous distributions of birth intervals. Also, the precision and accuracy of informant recall might be expected to decrease, the more distant the event in time and space.

Again, data for siblings and parents made it possible to assign the majority of births to at least a twenty-five year cohort. Since priests performed marriages, these events were duly entered into parish registers with appropriate dates. With field informants marriage dates were usually remembered, or could be calculated from age at marriage. Date of marriage does not necessarily identify the beginning of cohabitation or starting a family, however, particularly in the nineteenth century when priests might be seen infrequently. Information on mortality is seriously under-represented in these data, and therefore has not been analyzed.

Problems were encountered when comparing information about the same event from two or more documentary sources. Where different dates or localities were given for the same event, the source closest to the event, and/or the source which gave information most consistent with dates, localities, etc., for related events was accepted. Repetition of names in the population likewise caused problems in deciding which individual of the same name should be matched with which child, parent or spouse, date, or location. Again, consistency with other information was the criterion for deciding whether or not a match existed. If other information was not available for a cross-check then a match was not made.

Difficulties were also encountered in linking records of discrete vital events to complete life histories or to reconstitute families. Even for the recent population it was not always easy to tie informant data to written records. The problem was partly due to the fact that informants often used nicknames, for example, "Mike" while documents tend to record Christian names, for example, "Magloire". The fact that the Cree-speaking population of Grande Cache often had difficulty in pronouncing and spelling English and French names also confusion. Record linkage became much easier when it became evident that "Pachise" was "Baptiste," and "Santla" or "Saddler" were actually "Chastellain."

Limitations in the perspective and temporal scope of the available data sources have already been cited as factors which reduce the degree to which the historical population is ascertained. In addition, information which appears in various sources is not always complete, a situation which further reduces the degree of ascertainment possible. The 928 presumably unique individuals who have been wholly or partly documented represent, therefore, a sample of the population which has occupied the area from Jasper to Grande Cache from the early nineteenth century to 1975.

Degree of Record Linkage Achieved

Given the temporal overlap of the various nominal records it was expected that record linkage would prove successful for the Grande Cache population for a large portion of its early history. The degree of record linkage achieved using the sources described above is determined at three levels: identification of vital events, reconstitution of individual life histories, and reconstitution of families. A family is defined as a married couple with or without children. Ante-natal deaths have been excluded in these analyses.

Table 20 compares the distributions of births, marriages, and deaths by source of ascertainment. Of the total of 1,255 vital events, the majority, 95%, were identified in only one source. Record linkage was achieved for only 5% of the vital events enumerated. Informant recall accounts for 49% of vital events ascertained from single sources.

In the case of individual life histories, Table 21, only 10% were ascertained in more than one set of records, while 90% were identified from a single source. Nearly one-third (27%) of the 173 families were reconstituted by linkage data from two or more sources (Table 22). In these analyses it should be remembered that additional church and government records are potentially available for the twentieth century even though time constraints precluded examining them for this study. It is to be expected that these sources would include many of the same people and families presently identified only through informant recall. If the documentary sources alone are considered in Table 22, the proportion of families ascertained in multiple records increases to 48%, or nearly double the previous estimate for the combined sources. A search of more recent documentation might well be expected to increase the proportion of individuals and families ascertained through multiple sources of all kinds.

At first glance these results are disappointing as a demonstration of the potential of matching individuals by nominal record linkage of various historical documents and field work for certain native populations. But more importantly, when one realizes that the three major data sources, NWHB applications, church records, and informant recall, each contribute a large and unique portion of the total sample, it is clear that to have omitted any one of them could have led to a misleading description of the population.

Table 20: Distribution of vital events by source of ascertainment. C = church documents N = government records (mainly NWHB scrip applications) R = field informant recall

	Source							
Event	C	N	R	C+N	C+R	N+R	C+N+R	TOTAL EVENTS
Birth	216	200	443	35	13	8	2	917
Marriage	32	39	54	4	2			131
Death	21	64	119	1		2		207
TOTAL	269	303	616	40	15	10	2	1,255

Table 21: Number of sources in which individuals ascertained.

Number of individuals	Source		
	Church	Government	Field
196	x		
178		x	
455			x
41	x	x	
25	x		x
14		x	x
8	x	x	x
N = 917			

Table 22: Number of sources in which families (married couple with or without children) ascertained.

Number of families	Source		
	Church	Government	Field
37	x		
20		x	
69			x
20	x	x	
7	x		x
8		x	x
12	x	x	x
N = 173			

HISTORICAL DEMOGRAPHIC ANALYSIS AND RESULTS

The 175 year population record constructed for the Grande Cache population proved adequate for three types of historical demographic analysis: demonstration of the origin and historic continuity of the population; examination of population growth and sex distribution over several birth cohorts; and comparison of migration patterns in the nineteenth and twentieth centuries. An age-sex pyramid of the 1975 Grande Cache population is included. However, information on ascertainment of birth and death rates is not precise enough to allow similar pyramids to be constructed for earlier periods.

Origins of the Grande Cache Native Population

To trace the contemporary Grande Cache population to its founders, a genealogical chart was prepared showing the history of marital alliances for the five main families still living there in 1975 (Figure 8). Members of generations IV through VII are found in the 1975 population of Grande Cache.

All five families residing in the area in 1975 can be traced to European or Iroquois males represented in the earliest fur trade journals reporting on the region. The earliest record found for the Joachim family is for Joachim Tonatanhan, an Iroquois, who was hired in Montreal in 1818 by the North West Company and sent to work in the Athabasca district of northern Alberta (HBA:F.4/32). His marriage to a local native woman was blessed at Jasper by

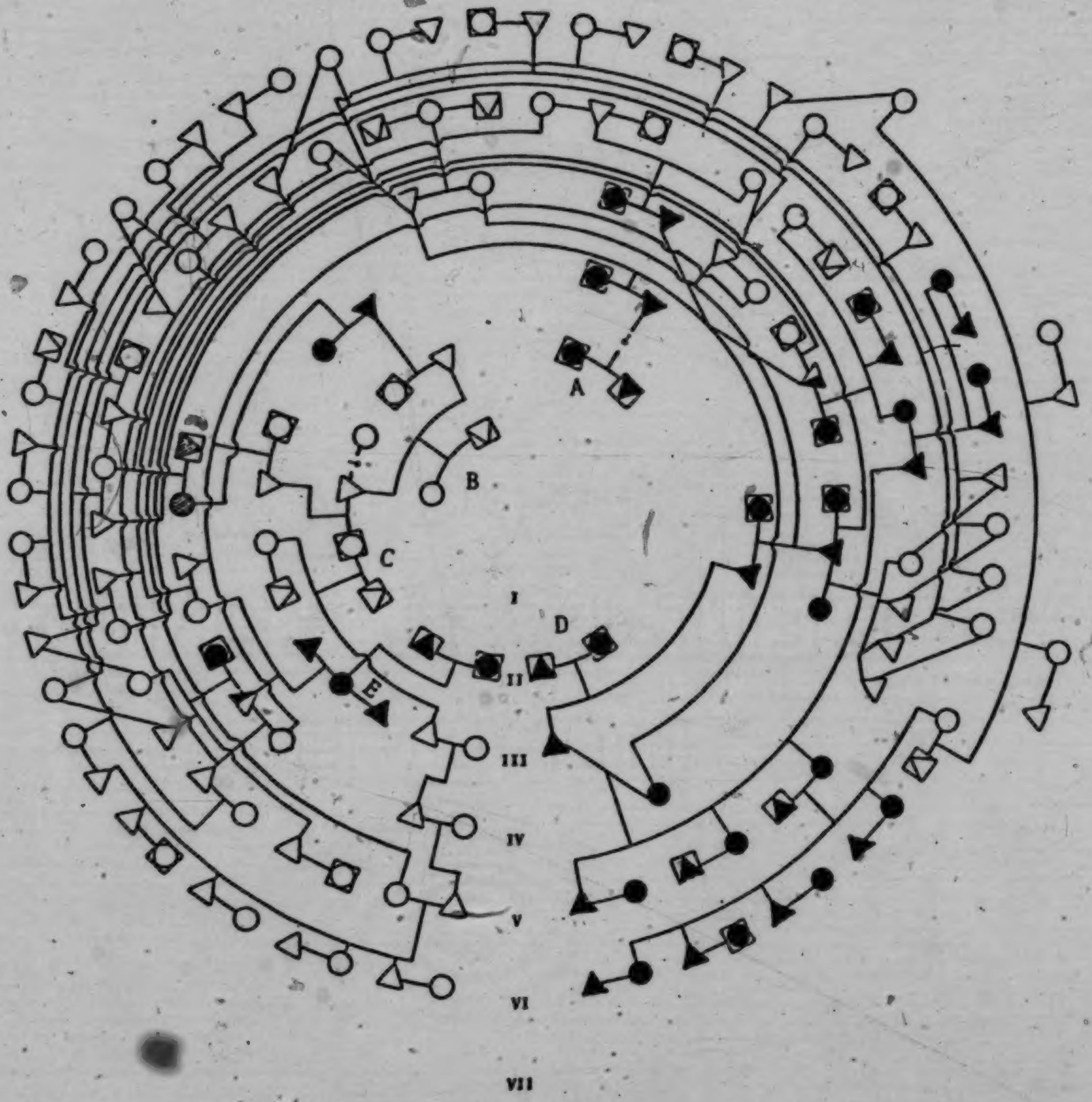


Figure 8: Marital alliances in contemporary and ancestral generations of the Grande Cache population.

● ▲	Reside at Jasper
○ △	Reside at Grande Cache
◍ ◭	Reside in Peace River area
▣ ▣	Fur company employee or freeman, or descendant of same.

A, Joachim family
B. Wanyande family
C. Delorme family
D. Moberly family
E. McDonald family
△ Male
○ Female

Father Lacombe on October 5, 1853 (PAA:71.220.3). The Wanyande family can be traced to Ignace Nawanionthe who traded with the North West Company in the Athabasca district as early as 1813 (HBA:F.4/32). In 1818-1819 he was known to the Hudson's Bay Company as Ignace Waniante, a free Iroquois who trapped in the Smoky River area (HBA:B.190/a/1). The Delormes were represented by Hudson's Bay Company employees in the Lesser Slave Lake district at least as early as 1823 (HBA:B.115/d/9). The McDonald and Moberly families are traced to the mid-nineteenth century through the male lines.[43] However, the men married Findlay and Cardinal females who were descendants of Freemen from the early part of the century.

In subsequent generations the members of these five families frequently intermarried as illustrated by the genealogies (Figure 8). Marriages outside of the five families were most often with descendants of other fur company employees or Freemen (indicated by a square around the appropriate ego symbols). These include families descended from men who carried the surnames of Findlay, Berland, Karaconte, Fraser, Cardinal, Campbell, Gaucher, Chastellain, Gladu, Desjarlais, and Plant.[44]

The Cree kinship terms in use at Grande Cache in the 1970's essentially follow Plains Cree terminology in which cross-cousin marriage is a dominant classificatory principle.[45] As with the Plains Cree, however, the Grande Cache population does not appear to have ever made a common practice of this marriage form. The genealogies indicate only one cross-cousin marriage. Interrelationships between families are often the result of exchange of sibling groups as marriage partners.

Less than one-quarter of the total number of marriages involved people who were not descended from males who had come west during the fur trade and married local Indian or Metis women. Most of these marriages occur in generation VI where ten of the thirteen cases involve European immigrants after 1950 when new roads and industries had begun opening the Grande Cache region to the outside world.

The genealogical reconstruction bears out the implication in fur trade documents that the Grande Cache population has been part of a network or regional band spread over the eastern slopes from Jasper to about the present site of Grande Prairie. The pattern of extensive intermarriages in early generations is consistent with seasonal mobility in which marital alliances can be formed between families who associate at spring and summer gatherings.

Two families, the Wanyandes and the Delormes, claim always to have lived at or near Grande Cache. In the latter case the earliest documentary evidence available does not dispute this contention. In 1913, a surveyor for the Canadian forestry service reported only two native settlements existed at Grande Cache which coincide with the areas currently occupied by the Wanyande and Delorme families.[46] It would have been these people that the squatters met when they moved northward after being evicted from Jasper National Park.

Population Growth and Birth Cohorts

As a result of the seasonal mobility of the native people in the study area, historical estimates of population size usually pertain to only part of an interrelated but widely dispersed group. In the nineteenth century Jasper House was the main contact area between the native population of the eastern slopes and those fur traders, missionaries, and explorers who left written records. Most historical attempts at enumeration are therefore incomplete, reflecting only that part of the population in the Jasper area at a particlar time. In Table 23 only the 1856 estimate given before the Select Committee on the Hudson's Bay Company and the two twentieth century estimates would be reasonably complete enumerations of the entire population in the Jasper and/or Grande Cache areas. These three estimates suggest an increase in population size in this century. By 1935 as many people were reported at Grande Cache as had been reported for that area plus Jasper in 1856. Between 1935 and 1975 the population at Grande Cache had increased by nearly a third.

Historical demographic data provides the means for interpreting changes in population size. Accurate estimates of the magnitude and direction of changes in population size require knowledge of rates of births and deaths, immigration and emigration. The current data base, however, has limitations imposed by the available sources of demographic information with regard to time span and segment of the population enumerated. Information on mortality and

Table 23: Historical estimates of population size in the Jasper/Grande Cache area.

Year	Estimated population size
1820's	23 hunters regularly come into Jasper House (HBA: B.115/a/6)
1838	28 children from 16 nuclear families baptisted (Warner and Munnick 1972)
1846	44 individuals baptised (De Smet 1905)
1856	200 Indians regularly trade at Jasper House (Great Britain 1858)
1858	30 tents of "RC Iroquois half-breed Freemen" at Jasper, or 150 people (Spry 1968)
1879	6 families of Iroquois at Jasper House (HBA: B.60/b/3)
1882	13 families of Iroquois at Jasper House (HBA: B.60/b/5)
1889	6 families of Iroquois on south side of Peace River (HBA:B.56/e/3)
1935	150 "Halfbreeds" reside at Grande Cache (PAA 69.90)
1975	238 native people live at Grande Cache (Field notes)

emigration, for example, is very limited.

The historical record of births allows inferences regarding patterns of population growth and decline. In Table 24 the available information on births is distributed by source of ascertainment and cohort. All three sources give virtually the same ratio of local to immigrant births for the segment of the population they report: church 87% local births, government 84%, and recall 91% local births. The different sources therefore appear to have made comparable enumerations of the population residing in Jasper and Grande Cache area; and the data base should provide consistent estimates for the nineteenth and twentieth centuries.

The distribution of births by cohort is presented in Table 25. The pattern is one of increasing size of birth cohorts to 1900, a relatively sharp decrease in numbers in the next 25-year cohort, followed again by increasing size. The changes between adjacent cohorts are:

Cohort 1 - 2:	129% increase
Cohort 2 - 3	14% increase
Cohort 3 - 4	24% increase
Cohort 4 - 5	30% decrease
Cohort 5 - 6	12% increase
Cohort 6 - 7	78% increase

Obviously, such high percentages of increases attributable to births would have been opposed by mortality and emigration, and on the other hand, augmented by immigration, to result in moderate

Table 24: Individuals ascertained by locality and source. (Eleven ante-natal deaths excluded.)

C = church documents N = government records (mainly NWHB scrip applications) R = field informant recall

Birth locality \ Source	C	N	R	C+N	C+R	N+R	C+N+R	Total by locality
Grande Cache	1	14	263	1	6	1	1	287
Jasper	105	114	106	28	17	13	8	391
Grande Cache/ Jasper	58	20	30	7	1	3	1	120
Peace River		8	11	1				20
Edmonton	13	16	10	3	3			45
Lesser Slave Lake		4	1					5
Out of region	10	5	18	3	1			37
Unknown	9	1	1	1				12
Total by source	196	182	440	44	28	17	10	917

Table 25: Distribution of births by 25 year cohorts for population residing at Grande Cache and/or Jasper. (Eleven ante-natal deaths excluded.)

Birth locality	1. Pre-1825	2. 1825-1849	3. 1850-1874	4. 1875-1899	5. 1900-1924	6. 1925-1949	7. 1950-1975	TOTAL
Grande Cache			6	21	26	78	156	287
Jasper	14	80	84	81	63	19	50	391
Grande Cache/ Jasper	18	22	21	27	14	12	6	120
Peace River		1	1	8	4	4	2	20
Edmonton	2	6	10	20	4	1	2	45
Lesser Slave Lake		1	3				1	5
Out of region	13	3	2	2	1	11	5	37
Unknown	4	3	4	1				12
TOTAL	51	116	131	160	112	125	222	917

growth of the population. A trend toward increase in population size is apparent from the data in Table 23. Of the limited number of deaths ascertained, 109, or almost half, occurred in pre-reproductive years. Ante-natal and infant mortality accounted for fifty of these deaths. These figures suggest that total mortality may have been high. Historical evidence for the Jasper and Grande Cache neighbourhood indicates that families did leave the area.

The very much smaller size of the first birth cohort may in part be due to the difficulties of recording events in remote communities, but historical evidence does indicate that the area was initially sparsely inhabited.

The decrease in births in the 1900-1924 cohort coincides with an influenza epidemic in 1918-1919, which was accompanied by a high death rate across the country. Many potential parents may have died in the study area, but again the poor recovery of mortality data makes it impossible to give an unequivocal statement.

Finally, the figures in Table 25 indicate that most births recorded for the population resident at Jasper and Grande Cache occurred in these areas. Local births account for 81-95% of cohort size between 1825 and 1975, suggesting that natural increase has been responsible for most of the population growth. The pre-1825 cohort records a lower incidence of 67% local births, a result consistent with the fact that Freemen families were moving into the area at the beginning of the nineteenth century. Immigration to the area after birth drops from a high of 33% of the population enumerated before 1825 to a low of 5% in the most recent population.

Distribution of Population by Sex

A distribution of the population sample by sex provides another indication of the consistency of the data base and also allows inferences about migration patterns. In Table 26 the ratios of numbers of males to those of females are close to unity for most birth cohorts, a distribution suggesting that no consistent bias toward one sex exists in the documentary sources.

The earliest cohorts show a few more females than males, a fact which at first glance would seem to support suggestions that females were in excess in some Indian populations in the early nineteenth century. In Chapter II this apparent descrepancy was explained in terms of cultural distinctions in the age at which males and females entered adulthood. The current data should be relatively free from biases of age or marital status in determining opportunity for ascertainment. The numbers and time span involved in the present instance are rather small to demonstrate any particular trends. There may really have been a few more females than males present, or women may have been readily contacted by priests because they stayed in base camps while men were more often travelling in hunting, trapping, or trading parties.

The most recent cohort of births indicates a large excess of males in proportion to the total cohort size. This cohort was totally ascertained through informant interviews in the study area, and a cross-check with other records would be needed to verify the current results. Field data give no indication of exceptional numbers of females leaving the population through death or migration. It is

Table 26: Sex distribution by birth cohorts for population residing in Jasper and/or Grande Cache area. (Ante-natal deaths excluded.)

Figures in ( ) indicate number of individuals in count who were born outside of the referent area.

Sex Birth cohort	Males		Females		Unknown	TOTAL	
Pre-1825	21	(13)	30	(2)		51	(15)
1825-49	51	(7)	61	(4)	4	116	(11)
1850-74	66	(10)	65	(6)		131	(16)
1875-99	87	(18)	73	(12)		160	(30)
1900-24	59	(3)	51	(6)	2	112	(9)
1925-49	60	(10)	64	(6)	1	125	(16)
1950-75	127	(6)	93	(4)	2	222	(10)
TOTAL	471		437		9	917	

possible that some women have been forgotten as they acquired new names through marriage and/or left the area.

Males were more often immigrants to the area than females, although most cohorts again do not indicate a significant bias toward one sex or the other in this regard. The exception is the pre-1825 cohort, when three times as many males as females immigrated---a result consistent with historical evidence for the entry of Metis and eastern Indian males about this time. Following the founding of the population the pattern of immigration through the early twentieth century is congruent with the social flexibility observed in hunting and trapping populations where individuals and families are seasonally redistributed among local groups to maintain a viable subsistence unit.

Migration and Endogamy

Migration patterns at marriage are examined to assess the incidence of endogamy for the population. As in the previous chapter, endogamy is defined in either of two ways: as identical birthplaces for spouses; or as identical birth and marriage localities for individuals.

Available marriage data were distributed by source of information and location of marriage (Table 27) in order to compare the contribution each source has made to this subset of data. In the present instance, the three information sources differ with respect to distribution of marriage localities. Church records indicate 63% of the sample of 131 marriages occurred in the Jasper/Grande Cache neighbourhood. Only 34% of those marriages ascertained through

Table 27: Distribution of marriages of residents in Grande Cache/ Jasper area by locality and source of marriage.

N = 131 marriages. Those ascertained in more than one source are counted in each source.

Marriage locality \ Source	Church	NWHB	Field	Total by locality
Grande Cache			70	70
Jasper	32	17	36	85
Grande Cache/ Jasper	9	4	9	22
Peace River	1	8	2	11
Edmonton	22	27		49
Lesser Slave Lake		2		2
Out of region	1	4	2	7
Total by source	65	62	119	246

government (North West Half Breed and Indian Affairs) records are attributed to the study area, while 97% of the marriages reported by informants were so identified.

These variations are a result of the way each source of information was collected. Priests travelled to the eastern slopes as early as 1838, and would therefore have had firsthand opportunities to record marriages occurring in the area. The large region covered by parish registers consulted for this study also allows ascertainment of some marriages involving emigrants from Jasper and Grande Cache. Government documents ascertained relatively few Jasper or Grande Cache marriages because officials did not go to the area. Only those people who both came to the Edmonton region and appeared before Half Breed or Treaty commissions would be enumerated. By contrast, field work was centered in the study area and therefore there was little opportunity for those married elsewhere to be counted unless they had moved back to Jasper or Grande Cache and had stayed there until 1973-1975. Since church and government documents overlap in time their respective biases may have a compensating effect. The apparent bias toward local marriage evidenced in the field data requires verification from other sources of information on the contemporaneous population. However, given that field data cover a time period when priests were travelling to the area on a more frequent and regular (approximately monthly) basis, a trend toward a higher incidence of local marriages is not unreasonable.

Tables 28, 29 and 30 compare husband and wife birthplaces for 96 marriages, and birth and marriage localities for 112 married males

Table 28: Distribution of Husband and Wife birthplaces for 96 marriages and distribution of same marriages by date and locality.

Husband birthplace \ Wife birthplace	Grande Cache	Jasper	Grande Cache/ Jasper	Peace River	Edmonton	Lesser Slave Lake	Out of region	TOTAL	Number of marriages: Pre-1900	Number of marriages: Post-1900	Number of marriages: TOTAL
Grande Cache	18	7	1	2			4	32		34	34
Jasper	5	13	4	2	1		2	27	18	22	40
Grande Cache/ Jasper		1	1					2	4	2	6
Peace River	2	2	1					5	3	1	4
Edmonton	2	5	2		3			12	7	3	10
Lesser Slave Lake		1	1				1	3			
Out of region	3	7	4				1	15	1	1	2
TOTAL	30	36	14	4	4		8	96	33	63	96

Table 29: Distribution of 112 married males by birth and marriage locality and distribution of same marriages by date and locality.

Marriage locality / Birth locality	Grande Cache	Jasper	Grande Cache/ Jasper	Peace River	Edmonton	Lesser Slave Lake	Out of region	TOTAL	Number of marriages		
									Pre-1900	Post-1900	TOTAL
Grande Cache	26	4	1	3				34		35	35
Jasper	2	18	6	2	7		1	36	20	20	40
Grande Cache/ Jasper			2		1			3	6	4	10
Peace River	2	2						4	5	1	6
Edmonton	1	8			5			14	14	3	17
Lesser Slave Lake	1	1			1	1		4	1		1
Out of region	2	9		1	3		2	17	2	1	3
TOTAL	34	42	9	6	17	1	3	112	48	64	112

Table 30: Distribution of 119 married females by birth and marriage locality and distribution of same marriages by date and locality.

Marriage locality / Birth locality	Grande Cache	Jasper	Grande Cache/ Jasper	Peace River	Edmonton	Lesser Slave Lake	Out of region	TOTAL	Number of marriages		
									Pre-1900	Post-1900	TOTAL
Grande Cache	24	2	1	1			1	29		35	35
Jasper	6	20	4	2	14	1	1	48	19	19	38
Grande Cache/ Jasper	2	9	4	1	3			19	6	4	10
Peace River	1	2		2				5	4	1	5
Edmonton		1			8			9	20	7	27
Lesser Slave Lake					1			1	1		1
Out of region	4	2			1		1	8	2	1	3
Total	37	36	9	6	27	1	3	119	52	67	119

and 119 females. The incidence of endogamy for the neighbourhood including Jasper and Grande Cache is 52%, 53% and 61%, respectively. In other words, about half of all marriages have been between people who were born and have stayed in the area. The frequency with which females remain in their birth area until marriage is slightly higher than is true for males. This finding, in conjunction with evidence from fur trade journals, that hunting and trading groups frequently consisted of male affines suggests that men tended to move on marriage more often than women. One implication of these findings is that women would have a better chance of being ascertained in their birth area because they stay there longer.

The number of marriages occurring before and after 1900 in each locality is also indicated on Tables 28, 29 and 30. The greater number of marriages recorded in the twentieth century can be attributed to the population growth demonstrated by previous analysis of birth cohorts.

There is a tendency toward endogamy in the Jasper/Grande Cache population, but in-migration to the population has also occurred. Edmonton appears to have been the single most common area supplying immigrants, but information is biased because equivalent searches of records have not been made for other areas.

Tables 31 to 34 provide tabulations of marriages for tests of association between birthplaces of marriage partners and association between marriage and birth localities. These comparisons relate to the Grande Cache/Jasper region as the referent locality.

For those marriages which occurred in the referent locality

Table 31: Observed and expected distributions of Husband and Wife birthplaces for marriages occurring at Jasper/Grande Cache.

OBSERVED

		Wife birthplace		
		In area	Out of area	
Husband birthplace	In area	44 (55%)	10 (13%)	54
	Out of area	25 (31%)	1 (1%)	26
		69	11	80

EXPECTED

		Wife birthplace		
		In area	Out of area	
Husband birthplace	In area	46.57 (58%)	7.42 (9%)	54
	Out of area	22.42 (28%)	3.57 (5%)	26
		69	11	80

Table 32: Observed and expected distributions of Husband and Wife birthplaces for marriages occurring outside of Jasper/Grande Cache.

OBSERVED

		Wife birthplace		
		In area	Out of area	
Husband birthplace	In area	6 (35%)	2 (12%)	8
	Out of area	6 (35%)	3 (18%)	9
		12	5	17

EXPECTED

		Wife birthplace		
		In area	Out of area	
Husband birthplace	In area	5.65 (33%)	2.35 (14%)	8
	Out of area	6.35 (37%)	2.65 (15%)	9
		12	5	17

Table 33: Observed and expected distributions of birth and marriage localities for married males residing in Jasper/Grande Cache area.

OBSERVED

Birth locality	Marriage locality: In area	Marriage locality: Out of area	
In area	59 (53%)	14 (13%)	73
Out of area	26 (23%)	13 (11%)	39
	85	27	112

EXPECTED

Birth locality	Marriage locality: In area	Marriage locality: Out of area	
In area	55.4 (49%)	17.6 (16%)	73
Out of area	29.6 (26%)	9.4 (8%)	39
	85	27	112

Table 34: Observed and expected distributions of birth and marriage localities for married females residing in Jasper/Grande Cache area.

OBSERVED

Birth locality	Marriage locality: In area	Marriage locality: Out of area	
In area	72 (61%)	24 (20%)	96
Out of area	10 (8%)	13 (11%)	23
	82	37	119

EXPECTED

Birth locality	Marriage locality: In area	Marriage locality: Out of area	
In area	66.15 (56%)	29.85 (25%)	96
Out of area	15.85 (13%)	7.5 (6%)	23
	82	37	119

(Table 31), the incidence of endogamy estimated from the joint distribution of husband and wife birthplaces is 55% while the incidence expected by chance alone is 58%. By contrast, for those marriages which took place out of the referent locality (Table 32), there is the expected deficiency of marriages to individuals born in the area. However, wife birthplace and husband birthplace appear not to be significantly associated in these data, although there is a deficiency in the number of marriages occurring in the area in which both spouses were born elsewhere.

Males were observed to marry in their locality of birth in 53% of all cases (Table 33) compared to an expected frequency of 49% for this event. For females the observed incidence is 61% compared to an expected incidence of 56% (Table 34). Although for males who resided in the Jasper/Grande Cache area, marriage locality was random with respect to birth locality; for females this was not the case. There appears to be a significantly greater probability that women who were born out of the area will have also married out of the area.

For the comparison of husband and wife birthplaces virtually all deviations between observed and expected distributions involve husbands and wives born outside of the Jasper/Grande Cache area. Fewer of the marriages occurring at Jasper/Grande Cache are between people who were both born outside of the area than would be expected statistically.

There are also more residents of the area who were both born and married outside of the area than would be expected if distributions were random.

When results are compared across Tables 33 and 34, most of the deviation between the observed and expected distribution is accounted for by deficiencies in the numbers of males who are born in the area but leave to marry, and in the numbers of females from outside who come to the Jasper/Grande Cache area to marry.

A semi-nomadic lifestyle might be expected to produce such patterns of association between birth localities for mates or birth and marriage localities for individuals. Hunting and trapping bands characteristically experience at least seasonal shifts in membership; thus people from a wide area potentially may meet and marry, and they may easily do so at other than their localities of birth. But this situation does not necessarily preclude patterns of marital alliances being built up and maintained over generations between families. The marital alliances in the Grande Cache population already presented in Figure 8 indicate extensive intermarriage has occurred historically between five families. The present analysis, however, lacks the sensitivity to detect such patterns.

As the native population becomes more sedentary about Grande Cache the random association between spouses birthplaces or birth and marriage localities could disappear. On the other hand, intermarriage between local native people and outsiders who have come to participate in the industrial development of the region have already taken place. These outsiders are frequently not Indian or Metis, and so old patterns of family interrrelationships may break down as a new type of immigration into the Grande Cache area is initiated.

Results of the present analysis suggest a tendency toward matrilocal post-marital residence which is consistent with the greater frequency of movement for males compared to females between birth and marriage which was demonstrated in Tables 28 to 30. If matrilocality was a common pattern then results should indicate that males who leave the referent area to marry females from other localities would tend not to return. Likewise, there should be fewer females than males among married residents of Jasper/Grande Cache who were born out of the region.

In Table 32 only 12% of the sample are males who were born in Jasper/Grande Cache but left the area to marry females born elsewhere. By contrast, 35% of the same sample are females who were born in the area but left to marry males from other localities. Clearly females are returning to their birth locality more often than males following marriages in other regions. The assumption is that they were also more frequently returning with their husbands to live among their own relations.

From Tables 33 and 34 it can be seen that among the married residents of the Jasper/Grande Cache region, immigrant males were more common, representing 34% of the sample, than immigrant females who represent only 19% of the available data.

The distribution of husbands and wives by birth localities in Table 32 provides some evidence for the stability of post-marital residence patterns. According to this table, the sample of marriages which occurred outside of the referent area includes equal proportions (35%) of unions in which the female was born in but married a male from outside, and in which both mates were born in the Jasper/Grande Cache region. Again, these proportions, which account for 70% of the sample of out-of-area marriages, are congruent with a pattern of returning to live for some period of time with the kin group of the wife.

Age-Sex Pyramid

The age-sex pyramid in Figure 9 was constructed for the population observed at Grande Cache in 1975. As already indicated, information on birth and death dates is too imprecise to allow similar pyramids to be constructed for earlier periods.

This is a young population with approximately 60% under twenty years of age. The reason for the constriction of the age-sex distribution in the 20-29 year-old group is not obvious. There is no evidence that members of this age group had temporarily or permanently left the area, nor was childhood or infant mortality reported to be exceptionally high in the 1950's. The ratio of 137 males to 101 females is also unbalanced in the 1975 population. For the moment these apparent anomalies may best be attributed to random variability which Wachter (1978:189-223) has demonstrated to be typical of age pyramids for small human populations. Comparisons to other similar populations should only be made bearing this possibility in mind.

Conclusions

Historical demography of the native population residing on the eastern slopes of the Rocky Mountains about Jasper and Grande Cache, Alberta is documented from the early nineteenth century to the present. The early data come from records left by Europeans who maintained contacts with the native population for business, religious, and political reasons. Field work between 1973 and 1975 extended the demographic history of the population to the present. The various

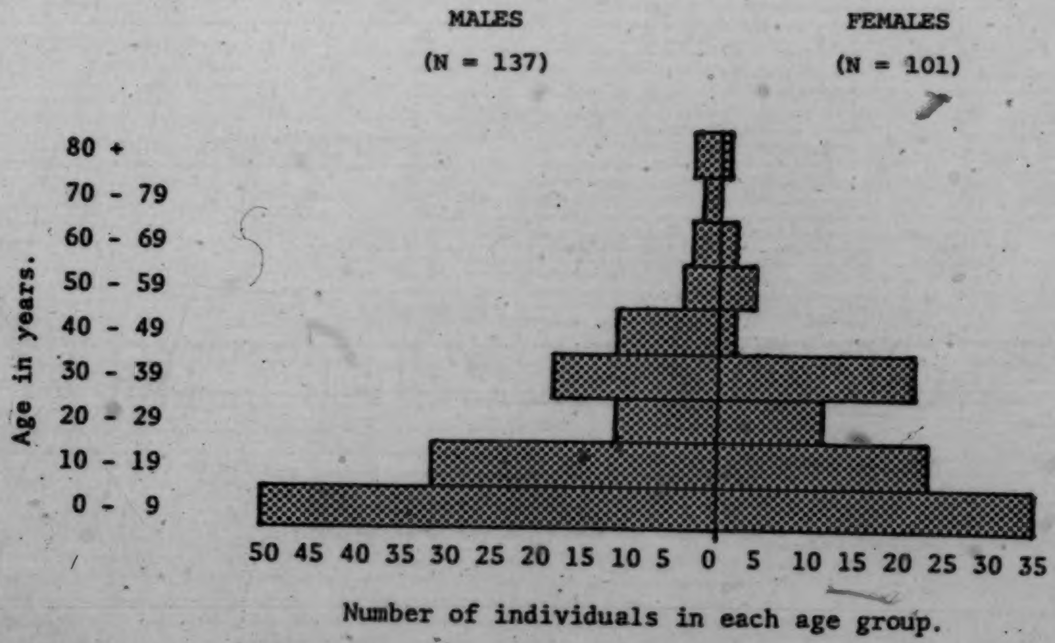


Figure 9: Age and sex distribution of the Grande Cache population, 1975.

records are to a certain extent disparate due to differences in time span and the way in which native people were enumerated, but together they provide a longitudinal data base which can be used to study changes in population size and patterns of migration.

Historically the Jasper and Grande Cache people were fur trapping specialists; and followed a seasonal pattern of hunting, trapping, gathering, and trading. Although a mixture of many groups---Iroquois, Ojibway, Sekani, Beaver, European, and Cree---the language and general lifestyle of the population was northern Cree. Ethnographic studies of hunters and trappers have emphasized the geographical mobility and social flexibility of such groups. In the present study geographical mobility has been shown to involve a moderate level of endogamous marriage and a lack of significant association between birth localities for mates or between birth and marriage localities for individuals who resided in the area. Analysis of migration patterns after birth and at marriage indicate that social flexibility in the study population more often involved movement of males than females. A part of this movement was the long range migration of males who came west as fur traders and married local women. There has also been a greater tendency for a male to change residence at marriage, a fact which suggests that he resided with his wife's relatives at least for a while after marriage. This tendency is suggested by early fur trade records for northwestern Alberta as well.

CHAPTER V

DISCUSSION AND CONCLUSIONS

This study of the demography of native hunting, gathering and trapping bands in western Canada is based on information recorded by non-native, literate observers. The period covered, 1800-1975, was one in which native populations were experiencing increasing intensity of contact with European culture. Although the time period considered extends well into the present era of urban and industrial development in the Canadian west, the individual studies emphasize the earlier phases of contact, particularly that of the fur trade. Only the historical reconstruction of the Grande Cache population extends beyond 1900, and in that area, urban and industrial development was delayed until the 1960's.

Taken together, the studies document an interrelated series of cultural, environmental, and demographic changes which resulted in part from contact with an alien culture and which included adaptation by the native populations. Several demographic effects of the fur trade imply biological and, in particular, evolutionary consequences for native populations. The effects of this early contact situation on native demography were indirect as well as direct; and it is a primary aim of this study to understand the relationships between cultural and physical environmental changes wrought by European contact on the one hand and demographic changes and cultural responses by native populations on the other hand.

One of the direct effects of the fur trade was on native subsistence patterns. The addition of fur trapping to a hunting and gathering economy was primarily a change in emphasis rather than a complete redirection of the subsistence pattern. Nevertheless, this shift in emphasis had important demographic consequences.

Population displacement occurred across the Canadian west when native groups with direct access to European posts on Hudson Bay used firearms obtained through the fur trade to encroach on territories occupied by inland tribes. Later, as fur posts were established at inland locations, tribes such as the Cree migrated in an attempt to maintain their role as middlemen between the traders and other Indian groups (Ray 1974; Heidenreich and Ray 1976). This effect was felt in northwestern Alberta, the location of the first study, even before direct contact with Europeans. In addition to large scale population displacement, the westward movement of the fur trade also resulted in migrations of smaller numbers of eastern Canadian Indians who came west as employees of fur companies or as free trappers.

By the time of direct contact in the western subarctic forests, both local and immigrant native populations were primarily oriented toward a fur trade economy. The emphasis on fur trapping was not achieved without stress, however, as it tended to disrupt food hunting and gathering activities. In the boreal forest hunting and gathering bands needed to be mobile in order to exploit available food resources which were unevenly distributed in both time and space. Fur trapping not only took time away from the food quest; it often took hunters to areas where food resources were in scarce supply. For example, some of the small furs most important in the trade, such as marten, were most common in mature boreal forest where game animals were uncommon. Most of the fur bearing animals taken for trade were not traditional or major food items. The native hunter frequently had to choose between food and fur; and insofar as he was tied to the traders by debts and the need to obtain a steady supply of European goods, especially firearms and ammunition, he often opted to concentrate on fur hunting.[47] As a result, starvation, often resulting in death, was an all-too-common phenomenon of the early contact period. In combination with European introduced diseases, this situation resulted in a marked decline in Indian population during the nineteenth century.[48]

An emphasis on fur trapping may also have led to greater atomism of the native population at some times of the year. In part this fragmentation would have been because food resources in fur rich areas could not support large groups; in part it was probably because new technology such as guns and traps made it possible to exploit the environment more effectively with smaller numbers of people. Steward has indicated that minimum band size has gone from at least 25 people "aboriginally" to as few as one or two nuclear families under the impact of European influences (Steward 1969). This conclusion accords with the band sizes indicated in fur trade records for the northwestern Alberta area in the first half of the nineteenth century.

Studies of subarctic band populations usually point out that European posts and missions became focal points for seasonal ingatherings of local bands (see for example, Leacock 1969; McKennan 1969). In some cases, ingatherings were actually encouraged by traders; for example around Hudson Bay where natives were employed in the semi-annual goose hunts. However, the opposite seems to have been true in northwestern Alberta. Large concentrations of natives about posts were actively discouraged by the traders for reasons of security, and also because such ingatherings often cut into prime hunting times. Security may have been of greater concern in the west than about Hudson Bay because populations were made up of many different elements which had recently migrated into the west or had been exploited by other Indian populations. When these different groups met about a post, hostilities could ensue which might threaten to embroil the traders as well. By curtailing the size and length of seasonal ingatherings the traders were reducing the number and duration of contacts between local bands. The demographic consequences would have included more limited potential for mate exchange and redistribution of membership among local bands.

In the late nineteenth century, missionaries were actively encouraging a settled and horticultural lifestyle for native peoples in the west. Their success rate initially was not high, with such settlement as did occur being on a seasonal basis. The seasonal ingatherings about the missions did, however, revitalize a pattern discouraged by fur traders. The July pilgrimmage at Lac Ste. Anne brought together native groups from a wide area, and therefore would have resulted in reexpanded networks of contact. At the same time, however, denominational differences were introduced which tended to create barriers to interaction and mate exchange which had not existed previously.

Other changes resulting from European contact included the introduction of wage labour as a means of subsistence. To some extent, wage labour was available in the fur trade in the form of short term contracts to hunt or travel for the traders. By the mid-nineteenth century, jobs were available as axmen on survey crews, as freighters, and as guides. Wage labour again provided opportunities for considerable mobility among native peoples. Migration matrices compiled for married native couples indicate relatively low levels of geographical endogamy existed in the nineteenth century, and that a larger part of the observed movement was among the males rather than among the females.

The three studies document the founding and development of a new biological and cultural entity in northwestern Alberta in the early nineteenth century. The founders were mainly Freemen, who could be either European, Canadian, Iroquois, or Ojibwa, who settled in the area and took local Indian women as wives. The Freemen families lived a lifestyle largely parallel to that of the Indian hunting and trapping bands, but they had a tendency towards endogamy subsequent to the formation of the initial Freemen families. The resultant Freemen bands had a special relationship to the fur trade in that they were trapping specialists and therefore tended to both benefit and suffer from the implications of a fur trade adaptation more than other native populations. Their biological and economic ties to the fur trade afforded them easier access to wage labour and, at times, preferential consideration in bartering their furs. On the other hand, their greater dependency on the fur trade decreased their ability to adapt to the decline of game or other food resources by concentrating their full attention on the food quest. A number of the cases of starvation recorded by the fur traders seem to have involved members of the Freemen bands.

Nevertheless, in balance they seem to have been able to attain a higher standard of living than most other native bands. This difference may help to explain the fact that the Freemen or Metis population increased at the same time as the Indian population declined under the impact of disease and starvation. There is considerable evidence that the Metis suffered less mortality from both epidemic and endemic desease during the nineteenth century. Their more frequent contact with the traders probably conferred upon them more resistance to the European diseases which proved so fatal to less acculturated native populations. Their greater freedom from such endemic disease as tuberculosis which ravaged the Beaver Indian bands of the Peace River area may have been due to a combination of greater resistance and greater freedom from the stress created by epidemic disease (Ferguson 1928).

Generally, the patterns of population distribution and size observed for northwestern Alberta are comparable to patterns observed for other hunting and trapping populations in the Canadian subarctic. Local band populations ranged seasonally between six and 80 individuals. Regional bands had from 164 to 526 members.[49] The geographical neighbourhoods defined for the early fur trade in northwestern Alberta were essentially co-extensive with drainage systems. A sense of territoriality was not as strongly developed among the native bands in these neighbourhoods as has been described among some other subarctic band societies, especially those about James Bay (Leacock 1954; Rogers 1969; Bishop 1974). Any sense of family ownership of hunting or trapping territories seems to have been virtually absent in the nineteenth century. A possible reason for this difference is the recent arrival or displacement of the populations in northern Alberta as a result of the fur trade.

The present study corroborates the evidence for matrilocality described for other subarctic band societies (Leacock 1955; Bishop 1974). Migration matrices indicate that men most often moved on marriage while women were more often married in the same locality in which they were born.[50] The observed differences between male and female migration are consistent, but not of great magnitude; therefore, matrilocality would have been only a tendency and not prescribed. The present analyses are based upon location at time of marriage, and do not consider subsequent residence patterns. As with other subarctic hunting and trapping bands, ultimate postmarital residence probably tended to be bilocal or neolocal as suited the most efficient distribution of population with respect to resources.

Endogamy initially was visible at the level of regional bands which occupied neighbourhoods, or larger geographical units. The geographical area over which populations were endogamous decreased with the rise of settlements, but the size of the group involved probably remained the same. By making subsistence resources available on a localized basis, urbanization in particular has meant that old patterns of population exchange resulting from the mobile lifestyle of hunters, gatherers, and trappers have been altered or even extinguished. Where native populations have settled in urban communities, as is the case at Grande Cache, Alberta, old lines of interrelationship are being supplanted by immigration from the European sector.

Finally, the present studies suggest that such demographic data as appears in historical records must be interpreted with careful attention to their historical and cultural context. For example, it was found that apparently aberrant adult sex ratios may be reported due to differences in the ages at which males and females customarily marry. The girls who married at a younger age were counted as adults earlier, thus tending to skew both adult and child sex distributions. It may very well be that other reports of sex ratio imbalances, such as

Wissler (1936) reports for the Cree, could be explained in a similar fashion. This is not to discount the possibility that imbalance really exists on occasion. Small populations at any given time may be made up of unequal proportions of the sexes, as was observed at Grande Cache for 1975. Such imbalance could occur by chance, or it may be due to unequal mortality, migration, etc. In such cases, it is the task of the researcher to consider the available demographic information with reference to all relevant contextual data.

Historical demographic studies such as those presented have relevance for several areas of research in the field of anthropological genetics. The interpretation of human biological variation and microevolution requires knowledge of mating and migration patterns, opportunity for random genetic drift, and population size and distribution (Schull and MacCluer 1968; Crawford 1970; Weiss 1976; Ward and Weiss 1976; and Swedlund in press). Theoretical models may take some or all of these variables into account, but the assumption that change occurs at constant rates is seldom supported by empirical evidence. Swedlund (in press) has summarized the importance of historical demography to anthropological genetics research in the statement:

> Evolution is history (and) understanding the processes governing human evolution is considerably enhanced by observing past trends in human population change and structure. It is perhaps the best focal point from which to view the interaction between cultural and biological change.

Present research has added to the fund of historical demographic information available for interpreting biological variation and microevolution for North American native populations. As early as the 1930's researchers were collecting genetic marker samples on western Canadian native populations and attempting to utilize comparison among gene frequencies to address questions about the historical relationships between various Indian tribes, between Indians and Eskimos, and between North American Indians and the rest of the human species (see for example Chown and Lewis 1960; Grant 1930; and Matson 1933, 1938, and 1940). Very little attempt was made in the earliest studies to complement the gene frequency data with appropriate historical and demographic research. As a result, the amount of population migration and admixture represented in the samples used was usually underestimated. In particular, the assumption seems to have been made, probably based on recent isolation of northern communities, that northern Canadian native populations are more "pure blooded" than native populations in the south. In fact, the history of contact in the subarctic region indicates much more disruption of aboriginal populations than appears to have been the case for northern plains groups. Any study using recent biological data to infer past relationships between populations should account, whenever possible, for modification of prehistoric relationships due to historic cultural and environmental changes.

Historic demographic research is basic to understanding human biological variation. The detail in which a sequence of historical events is known determines the degree to which it is possible to infer the evolutionary processes likely to have brought about the diversity observed. As Morgan (1973) has stated, "there is no substitution for histories if we are going to ask questions about the actual paths followed by populations during their evolution". Present research has demonstrated the availability of extensive records containing demographic information for Canadian native populations in the early post-European contact period. Further historical demographic research on native populations in Canada is possible and will add much to the understanding of their recent evolutionary history.

FOOTNOTES

1. To date relatively little work has been accomplished in this area either. As late as 1971 Piche (1973) remarked that no important studies of the demography of Canadian Indians existed.

2. Other Europeans left pre-1850 records for northern Alberta. Naturalists were in the area in the 1820's, viz. David Douglas (1914) in 1827 and Thomas Drummond (1830) who was on a side trip from the second Arctic Land Expedition. These explorers were most interested in the natural environment, and native people figure in their accounts infrequently. Reports of Franklin's expeditions contain much data of ethnographic interest; but the data relates to the lower Athabasca River, Fort Chipewyan, and the area northward and is therefore east of the area considered in the present study. Missionary records exist for 1838 and after 1842 there was an Oblate mission at Lac Ste. Anne north west of Edmonton; but these sources represent a very limited sample of the native population in northern Alberta.

3. The males in the original party were all free trappers; and the surnames involved--Lafleur, Bastonais, and Boisson--suggest Canadian heritage. The cannibal spirit, or witigo, relates to Algonkian rather than Athapascan culture; and so it is tempting to speculate that the women in this group were Cree or Ojibwa rather than Beaver Indians.

4. Lesser Slave Lake journal, entry for November 13, 1825:

> The Petit Gris eldest Son arr'd in the evening
> from the Gigiers Lodge to Join his Father at
> the Smoky River Having parted with the Gigiers
> Daughter who he had for a wife. (HBA: B.115/a/7)

According to Goddard (1916) in 1913 Beaver Indian males "invariably" made their home with the bride's parents.

5. The traders did comment on aspects of native culture which they found distasteful; for example, cannibalism and the practice of leaving elderly people to perish when they became a burden on the band. Had practices such as infanticide existed, which could explain disproportionate sex ratios, it might well be expected that some trader in some journal would have remarked on them.

6. Two North West Company traders, Daniel Harmon and David Thompson, married fourteen year old native girls au facon du nord. Harmon married "...a Canadians Daughter", undoubtedly by an Indian or Metis wife, at South Branch House in 1806 (Lamb 1957:98). Thompson married Charlotte Small who had been born in September, 1785 of Scottish and Chippewa parentage, at Isle a la Crosse in June, 1800 (Tyrrell 1916: xlv). Elderly informants at Grande Cache, Alberta in 1975 told the author that fourteen years of age was ideal for a woman at first marriage. One or two recent marriages in the community were also in that range.

7. The journal entries are confusing on the actual number of deaths. The Lesser Slave Lake journal for January, 1820, twice makes reference to 39 deaths (HBA: B.104/a/2). A separate Lesser Slave Lake Post journal for 1819-1820 mentions 40 deaths at Lac la Biche on February 3, 1820 (HBA: B.115/a/3). Finally, Colin Robertson at Fort St. Mary on February 24, 1820 refers to 40 deaths at Lac la Biche up to 27 January, 1820 (HBA: B.190/a/2). It is possible that these figures should be added to give a total of 79 deaths.

See also Report of Lesser Slave Lake District for 1819-1820 (HBA: B.115/a/2).

8. Fort Assiniboine Post journal 1830-1831 entries for March 26, 27, 29, 1831. Post Master Richard Grant, upon learning that an old, blind woman had been abandoned on the way into the fort, prevailed upon the son to go back for her with no success. When next men from the fort went in the direction in which the woman had been left, Grant ordered them to bring her to the fort if she was found alive, otherwise to bury her remains (HBA: B.8/a/2).

9. Lesser Slave Lake Post journal 1822-1823. Post Master Connelly was not impressed with native medical practices. On October 21, 1822 he remarks that the Indians, after recovering from a drinking bout are "...taken up in Singing (and) Conjuring for the recovery of the Sick Child--who, notwithstanding all their Noise, is not likely to recover..." (HBA: B.115/a/6).

10. For example, Colin Campbell writing from Dunvegan notes on February 26, 1830, "By all accounts the Indians destroy a great many large animals wantonly" (Dunvegan Post Journal, PAA.74.1).

11. Reports on the State of Edmonton District for the Year 1818-1819 (HBA: B.60/e/3). It should be noted that although these people were free in the sense of not being engages or servants of the fur companies, they still were bound by ties of loyalty, gifts, debt, and possibly even affinal ties to the companies.

12. HBA, Extracts from Dunvegan (Peace River) Journal of daily Occurences 1829/30 by C. Campbell, C. Trader of HBCoy--entry for November 1, 1829 notes that all Indians and most Freemen attached to Dunvegan "...have been working Beaver without incitement and say for their reasons in not leaving it for winter that if they do not Kill it the Iroquois of Fort Asneboine (sic) will be before them" (PAA.74.1).

13. See Nicks (1980:95). Also, Colin Robertson refers to "A ridiculous standard (of trade) intended for the freemen and Iroquois" at Fort St. Mary's in a letter to Messrs. Thomas and Miles written at Fort St. Mary's 1819-1820 (HBA: B.190/a/2).

14. See Baergan (1967:104). The drop after 1823 was probably due to the opening up of trade west of the Rockies according to Baergan. Baergan errs in attributing the exceptional returns of Lesser Slave Lake solely to post master Connelly's abilities as a trader.

15. Ray (1976) suggests local bands for woodlands populations usually consisted of 20 to 30 people in the winter, while summer bands might amount to 200 to 300 people gathered about fishing camps.

16. The question of how completely the native population can be ascertained from extant records is important if one hopes to make generalizing statements regarding reactions of that population to new economic, social, and health environments. Unfortunately, an independent set of records does not exist which might be used to test the adequacy of the fur trader's knowledge and recording of native peoples in northern Alberta. At some future date archaeological evidence might constitute such an independent check. At present, however, very little archaeological work has been carried out in the area; and much of what has been done has been related to European settlements; i.e., fur trade posts, rather than native settlements.

It is assumed that the fur traders were familiar with all of the native groups inhabiting the area under discussion and that their records therefore constitute an adequate base from which to derive demographic patterns for native populations. It was certainly in the traders' best interest to be familiar with all Indian groups--the trader was dependent on the native population not only for a supply of furs but for provisions as well. Particularly during the pre-1821 period of competition, a trader's success depended on establishing relationships with as many segments of the native population as possible. In order to plan strategic distributions of forts and manpower the head office of the Hudson's Bay Company required their officers in the field to include a discussion of the Indians in their area in the annual district reports. To the same end, emissaries were sent great distances to contact native groups and encourage them to trade with specific companies or forts. Henry Kelsey's journey inland from York Fort in 1691 is an early example of such reconnoitering, but the practice was long continued. In 1820-21, for example, the Hudson's Bay Company sent a man from Fort Edmonton across the Rocky Mountains to persuade Indians from that area to bring furs to Rocky Mountain House on the upper North Saskatchewan River. A group of "Cutney" agreed to do so, but turned back en route because Indians from the east side of the mountains threatened to attack them (HBA: B.60/e/4).

The district reports for Edmonton for 1815 and 1818-1819 (HBA: B.60/e/1,3) provide indirect, but persuasive, evidence also that the natives of northern Alberta forests were well known to the traders. In discussing the Indians who traded at Edmonton these reports drew comparisons between the Indians of the plains and those inhabiting the forests. The former inhabited a great tract of land stretching south to the Missouri River and traded on a very irregular basis, sometimes coming only once in three years. As a result, many of these Indians were "entirely unknown to us." The groups coming from the north, on the other hand, were "regular traders...all known to us." The plains groups, who were not well known, were not given credit, as repayment might be very long in coming; and it was impossible to control the native practice of selling hunts at a different post and thereby avoid repayment of debts altogether. The regular traders from the north, however, "all receive credits" and because they were so well known to the traders, the Hudson's Bay Company and the North West Company were able, through a mutual agreement, to enforce a policy by which these Indians "...should remain exclusively with the party with whom they have hitherto traded..." It is clear from the post journals kept in northern Alberta, that giving supplies of ammunition and other necessities on credit to natives in order that they might make their hunts each season was a standard practice.

The traders certainly did look at the native population with biased eyes. To them the important part of the native population, that which they most often enumerated, was "men able to hunt." It is therefore seldom possible to determine total population size, or sex and age distributions. But those segments of the population which were not counted, the women, the very old and the very young, would rarely, if ever, have lived for long unattached to "men able to hunt." They were part of a native population well known to the traders, and their general lifestyle, if not their actual numbers, is documented in the fur trade record.

In the fur rich forests of northern Alberta the early fur traders needed to know the distribution of the native population and its members well enough to locate posts advantageously and avoid losses through uncollected debts. The traders were active in promoting their business interests, and had large groups of Indians been opting out of the fur trade, it is difficult to think that they would not have become the target of a campaign to bring them into the trading sphere.

17. These were administrative districts set up by the Canadian government. Between 1882 and 1905 the numbers and boundaries of the districts underwent several changes. Maps in this chapter represent the districts prevailing at the time of Treaty 8 and the beginning of the NWHB scrip commissions. In the late nineteenth century these districts formed part of the North West Territories.

According to L.H. Thomas (1978:98), the four districts of Alberta, Athabasca, Assiniboia, and Saskatchewan

> ...became centres of sectional feeling or what may be termed 'district consciousness." This development was due in part to the fact that in terms of resources, communications, and historical development the Districts represented natural divisions of the North-West.

18. Mair (1908:66) reports that 3,568 Indians had signed Treaty 8 by June, 1906.

19. Stragglers are defined as "Indians having no location or having no recognized Chief; and Indian women married to Non-Treaty men who do not hold land on the Reserves" (Canada., Indian Affairs Annual Report for 1885:222-223).

20. Lieutenant Governor Morris (1880:228) explained during Treaty 6 negotiations in 1876

> ...that the Commissioners did not come to the Half-breeds: there were however a certain class of Indian Half-breeds who had always lived in the camp with the Indians and were in fact Indians, (who) would be recognized but no others.

The same provisions were made in Treaty 8

> ...the half-breeds have Indian blood in their veins, and have claims on that account. The Government does not make treaty with them, as they live as white men do, so it gives them scrip to settle their claims at once and forever. Half-breeds living like Indians have the chance to take treaty instead, if they wish to do so. (Mair 1908:360-361)

21. James Walker and J. Arthur Cote (Half-breed Commissioners), reported to the Honourable Clifford Sifton, Minister of the Interior, September 30, 1899, for example:

> ...we are glad to be in a position to report that, with the exception of small groups of Half-breeds living in the vicinity of White-Fish and Sturgeon Lakes, who had been duly notified to meet the Commission at Lesser Slave Lake, but who obstinately refused to appear, the entire Half-breed population resident within the boundaries of the territory covered by Treaty No. 8, which was being concurrently entered into with the Indians, has been carefully enumerated and every claim satisfactorily dealt with. (Canada. Department of Interior Annual Report for 1899, Part VIII)

22. This neighbourhood shows a correlation of 0 for a comparison of marriage location by last address, suggesting that marriage took place other than where partners customarily resided. There is a correlation, albeit low, between location of birth and area of last residence.

23. Reports of starvation in the north are widespread for the time period under consideration. Bishop Clut (Canada. Report of the Select Committee of the Senate 1888:163) laid the blame for the diminished numbers of wild animals on the Indians who were "improvident":

> If they could kill all the animals in a band they would do it. Since they have got possession of improved firearms, they kill to many.

24. The exhaustion of fisheries was reported to be a problem in the Treaty 5 area (see for example: Canada. Indian Affairs Annual Report for 1890: xxvi-xxvii).

25.

> At Lesser Slave Lake the Company and missionaries and most of the natives have cleared small pieces of ground, on which they grow potatoes and garden stuff for their use. Most of the natives attached to this Post subsist by fishing, eked out by such vegetables as they may be able to grow. They are nearly all employed during the summer by the Company in boating and transporting the trading outfits for the Posts in the district and on Peace River. The hire for this labour keeps them in clothing, ammunition and other necessities. Many of them subsist in this way altogether, but most of them hunt during the winter months. (Canada. Department of Interior Report for 1892:37)

G.M. Dawson visited Sturgeon Lake near Dunvegan on September 14, 1879; and reported a few rough log houses and small garden patches belonging to native peoples. At the time of his visit nearly all the men were away on the autumn hunt. (Canada. Geological Survey of Canada Report of Progress for 1879-1880:63B)

26. Bishop Clut accused the fur companies in the Athabasca District of going so far as to endanger food-getting activities in order to have their own needs attended:

> The Hudson Bay Company and traders there generally want to have plenty of meat and furs, and they do not give nets or twine enough to the Indians even in selling them, because they want to have plenty of furs. They think, I suppose, that if the Indians had plenty of nets they would live around the lakes and along the rivers and would not hunt for furs, and many times Indians starve because they have no hooks or nets. For that reason I gave orders to our missionaries as far as possible to buy more net twine. We get our twine generally from England and sell it or give it to the Indians to prevent starvation, but our means are too small to supply enough. (Canada. Report of the Select Committee of the Senate 1888:166).

27. According to Bishop Clut, "Generally all over Mackenzie Basin the Indians come to the missions every fall and spring." (Canada. Report of the Select Committee of the Senate 1888:162)

28. The comparison is made between pre-1850 Hudson's Bay Company and North West Company documents and NWHB applications. An example of the continuity between pre- and post-1850 Freemen and NWHB populations is contained in a paper by Nicks (1979).

29. We used to see Battle River people, off and on. Since they were Metis or French extraction like us, good fellowship prevailed, and some marriages took place. We did not come in contact with the Metis at Victoria; their being of Anglo-Saxon descent and of a different demonination (sic), no visits, to my knowledge, were ever made to them. (Callihoo 1953:26)

30. For example:

> A case or two of varioloid of a very mild type appeared at Pasquah's Reserve last spring, but the precautionary measure of general vaccination which the Department had taken on that as well as on all other reserves, prevented the spread of the disease to others, as well as diminished its virulence in the cases of those attacked by it. (Canada. Indian Affairs Annual Report for 1887:lx)

31. "Nominal records are those in which individuals are distinguished by name, and by that token are potentially linkable to other nominal records" (Wrigely 1973:5).

32. Nominal record linkage, according to Wrigely (1973:1):

> ...is the rather clumsy expression used to denote the process by which items of information about a particular named individual are associated with each other into a coherent whole in accordance with certain rules.

The volume edited by Wrigely is one example of a growing series of works which discuss techniques for building data sets for historical demographic analysis.

33. The ethnohistory of the area is further discussed in Morrison (1977) and Nicks (1974, 1979).

34. Fur trade records suggest that the Freemen who ventured into the eastern slopes area about the upper Athabasca River and the Smoky River at the beginning of the nineteenth century were entering an uninhabited area. Local legends exist concerning Snare Indians about Jasper who were massacred by Assiniboine Indians early in the contact period. Other Indians frequenting the area were most likely Shuswap from west of the mountains. Members of the Shuswap tribe did come into Jasper House to trade well into the nineteenth century, and it may well have been members of this tribe who met with the Assiniboine if there is any credibility to the local legend.

35. In the late nineteenth century the Hudson's Bay Company complained that the wandering habits of the Jasper Iroquois and Freemen made it difficult to control the trade with them (HBA: B.60/b/3; B.60/e/13, 14;

and B.297/e/1).

36. According to an informant who had grown up at Entrance, those evicted from Jasper included members of the Moberly, Findlay and Joachim families.

37. Stores were available to the south at Hinton and Entrance and in the north at Grande Prairie. By mid-century, at least, stores were also located at one or more of the settlements in the immediate area of Grande Cache (Rick Simonsen, Department of Anthropology, University of Alberta, personal communication). One informant, Daniel Wanyande, Sr., described the role his family played as traders early in the century--they would buy excess supplies at Edmonton in the summer and cache them in the Grande Cache area to sell to other people throughout the winter months.

38. The Grande Cache and Jasper population generally is not in "Treaty" and consequently they are not covered by band roles, annuity sheets, or such documents kept by the Department of Indian Affairs. Residents of the area who at one time or another lived with relatives in the Edmonton area or on the upper Peace River might become part of a Treaty band and are therefore reported occasionally in Indian Affairs documents.

39. Registers consulted did not provide complete coverage for each of the missions involved; for example, there is a gap from 1876- 1881 in the St. Joachim registers and from 1871-1889 in the St. Albert registers.

40. "Parliamentary Minutes of Evidence taken before the Select Committee on the Hudson's Bay Company". (Great Britain: House of Commons Session 2 1858)

Father De Smet (1905:536) described a meeting between himself and descendants of Iroquois immigrants at Jasper Lake in April of 1846, noting that one old Iroquois, Louis Kwaragkwante, now was head of a family numbering 36 people. While at Fort Jasper, De Smet baptised 44 persons. These sacraments are included in parish registers already cited. Some references provide evidence for the distribution of native peoples in the area, for example, a Forestry report by J. A. Doucet (Canada 1915).

Similarly, S. Prescott Fay, who carried out natural history surveys in the area, recorded locations of camping areas used by the native peoples in his "Journal of hunting expedition, Jasper to Grande Prairie 1914 and papers re exploration in region 1905-33" (Glenbow-Alberta Archives A .F282).

Numerous "travel-logue" style works exist for the Jasper area in particular, and these are of some interest as they identify native people resident in the area and add details regarding their lifestyles (see for example, Coleman 1912). Many articles contained in "The Canadian Alpine Journal" document the work of local native men on outfitters' crews early in the nineteenth century.

41. Field research methods, including a copy of the life history questionnaire used to gather demographic information, are described in Nicks (1974).

42. The Collins family is also identified as resident in Jasper in discharge from Treaty papers in Indian Affairs records (PAC: RG10 Vol. 3907 File 106040 and 106041).

43. The McDonald family was identified through field research and church records. The arrival of the founder of the Moberly family is recounted in Moberly (1929).

44. Each of these names is found in fur trade records for northern Alberta. The earliest reference found in records consulted for the present study are indicated below.

Findlay: brothers, Freemen, recorded in Jasper House post journal 1827-1828 (HBA: B.94/a/1)

Berland: recorded in Jasper House post journal 1827-28; 1829-30; and 1830-31 (at Smoky River) (HBA: B.94/a/1-3)

Karaconte: Louis Karaquienthe traded with the North West Company at Dunvegan in 1818-1819 (HBA: F.4/32)

Fraser: clerk at Lesser Slave Lake 1821-1822 (HBA: B.115/d/6)

Cardinal: in Smoky River area 1818-1819 according to Lesser Slave Lake post journal (HBA: B.115/a/2)

Campbell: Edmonton District Report 1818-1819 (HBA: B.60/e/3)

Chastellain: a Canadian hired by Hudson's Bay Company in 1816. In 1818-20, he was at Fort St. Mary on Peace River. (Rich 1938).

Gladu: several men in family, in Smoky River area in 1818-19 according to Lesser Slave Lake post journal (HBA: B.115/a/2)

Gaucher or Gauthier: Hyacinthe Gauthier is listed in the Northern Department Engagement Register for 1823-1851 as a laborer hired at Lachine in April, 1850 (HBA: B.239/u/1)

Desjarlais: several men in family, interpreter, Freemen, identified at Fort St. Mary on upper Peace River 1819-20 according to Lesser Slave Lake District Report (HBA: B.115/e/1)

Plante or Laplante: Francois Plante, a Canadian, worked at Lesser Slave Lake and the Rocky Mountains in 1821-1822 (HBA: B.115/d/5)

45. Kinship terminology collected at Grande Cache by the author was very similar to that presented in Mandlebaum (1940:232-233). Such variation as existed is most likely due to lack of skill in recording linguistic data on the part of the author.

46. Doucet (Canada 1915:46) reported that in 1913

> Five families were found living in one of the proposed (forest) reserves. They are Indians or half-breeds. One has squatted on Smoky flat, about 15 miles above Sheep creek entrance; while the other four are on Smoky flat immediately below the entrance of Sheep creek. They have built themselves shacks, but they have made no other improvements whatever on the land. During the summer months these people spend a good deal of the time on these flats, leaving only at intervals for hunting tours. During the winter season they scatter through the territory for their different trapping grounds.

47. Some traders seem to have been unaware of, or unsympathetic toward, the strain which fur trapping placed on the food quest. George Linton, post master at Lesser Slave Lake, in March, 1831, complained that fur returns were poor and blamed fires which had destroyed the marten habitat.

> I have made this to appear very plain to the Indians who are concerned how they impoverish themselves and their country, merely by their own negligence and I have Known Indians to set fire in the dry grass merely to have a clear hunting ground for Moose the year following; or a good encampment road &c and as this is the prevailing case with most of them it does them serious injury without them being aware of it. (HBA: B.115/a/9)

48. Archaeological evidence from a protohistoric Arikara site in South Dakota also implicates starvation and communicable diseases introduced by Europeans in population decline. The researchers cite crop failure and scarcity of bison as factors in starvation which presumably could have occurred prehistorically as well. It would be informative to know what kinds of pressures were being exerted on the Arikara by other populations reacting to European contact which might also have interferred with their food procuring activities (Owsley and Bass 1979).

49. For comparative data see Bishop (1974), Rogers (1969), and McKennan (1969).

50. Swedlund (in press) notes that studies of sedentary agricultural populations show that females migrate at higher rates than males. He suggests that the tendency for males to inherit land in these societies is responsible for a "somewhat higher" mobility for females.

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B.56/a/2	1824-1825
B.56/a/3	1834-1835
B.56/a/4	1835-1836
B.56/a/5	1836-1837
B.56/a/6	1837-1838
B.56/a/7	1838-1839
B.56/a/8	1839
B.56/a/9	1839-1840
B.56/a/10	1841-1842
B.56/a/11	1842-1843
B.56/a/12	1843-1844
B.56/a/13	1844-1845
B.56/a/14	1866

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B.94/a/1	1827-1828
B.94/a/2	1829-1830
B.94/a/3	1830-1831

Lesser Slave Lake Post Journals

B.115/a/1	1817-1818
B.115/a/2	1818-1819
B.115/a/3	1819-1820
B.115/a/4	1820-1821
B.115/a/5	1821-1822
B.115/a/6	1822-1823
B.115/a/7	1825-1826
B.115/a/8	1826-1827
B.115/a/9	1830-1832
B.104/a/2	1819-1820

Fort St. Mary's Peace River Journals

B.190/a/1	1818-1819
B.190/a/2	1819-1820
B.190/a/3	1820-1821

Fort Vermilion Peace River Journals

B.224/a/1	1822-1823
B.224/a/3	1827-1828

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B.41/a/1	1802-1804

Journal of Peter Fidler (Greenwich House)

B.104/a/1	1799-1800

Fort St. John Journal

B.189/a/1	1822-1823

Fort St. Mary's Account Book

B.190/d/1-2	1818-1819

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B.8/d/1	1826-1827
B.8/d/2	1832-1833
B.8/d/3	1836-1837

Dunvegan Account Books

B.56/d/1	1832-1833
B.56/d/2a	1839-1842
B.56/d/2	1841-1842
B.56/d/3	1842-1844
B.56/d/4	1844-1845
B.56/d/5	1845-1846
B.56/d/6	1850-1851
B.56/d/7	1856-1857
B.56/d/8	1857-1858
B.56/d/9	1860-1861
B.56/d/10	1861-1862
B.56/d/11	1863-1864
B.56/d/12	1864-1865
B.56/d/13	1866-1867

Lesser Slave Lake Account Books

B.115/d/1	1816
B.115/d/2	1817-1818
B.115/d/3	1817-1818
B.115/d/4	1820-1821
B.115/d/5	1821-1822
B.115/d/6	1821-1822
B.115/d/7	1822
B.115/d/8	1823
B.115/d/9	1823-1824

Fort Assiniboine Report on District

B.8/e/1	1824-1825

Dunvegan Post Inspection Report, Peace River District

B.56/e/1	1885
B.56/e/3	1889
B.56/e/4	1891

Saskatchewan (Edmonton) District Report

B.60/e/1	1815
B.60/e/2	1816
B.60/e/3	1818-1819; 1819-1820
B.60/e/4	1820-1821
B.60/e/5	1823 (July 20)
B.60/e/6	1823-1824

B.60/e/8	1824-1825
B.60/e/9	1862
B.60/e/10	1862
B.60/e/11	1875
B.60/e/13	1887
B.60/e/14	1888
B.60/e/20	1889
B.60/e/21	1889
B.60/e/23	1890

Lesser Slave Lake Report on District

B.115/e/1	1819-1820
B.115/e/2	1820-1821
B.115/e/3	1821-1822
B.115/e/4	1822-1823
B.115/e/12	1891

Fort Vermilion Peace River Report

B.224/e/1	1826-1827

Inspection Report, Lac Ste. Anne's Post

B.297/e/1	1889
B.297/e/3	1889

Lesser Slave Lake List of Servants

B.115/f/1	1818-1819

Dunvegan Correspondence Book

B.56/b/1	1838-1839

Edmonton Correspondence Book

B.60/b/3	1878-1886

HBCo Engagement Register Northern Department

B.239/u/1	1823-1851

Peter Fidler Notebooks

E.3/4 f.15

North West Company Ledger

F.4/32	1811-1821
F.4/35	

North West Company Servants' Contracts

F.5/1	1798
F.5/2	1803-1805
F.5/3	1815-1822

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Department of Interior Records, documents relating to North West Half Breed scrip commission	RG15
National Parks Branch Records.	RG84 (V.293)
CPR Explorations by Charles J. Hannington	MG12 B2

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ALBERTA DEPARTMENT OF HIGHWAYS (EDMONTON)

Notebook of Dominion Land Surveyor C.A. Grassie, 1912	#13366

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Succession Duties, Treasury Files, Government of the North West Territories.

ROMAN CATHOLIC CHURCH. ARCHDIOCESE OF EDMONTON

Copie des Registres de la Mission St. Joachim a Edmonton for 1858-1875 and 1882-1884.

Liber Baptismorum, St. Albert Parish, for:

May 13, 1861 to November 10, 1866
November 13, 1866 to September 1870
January 1, 1890 to November 19, 1893
November 1893 to July 1897
July 1897 to 1899 (inclusive)
1900 (inclusive) to June 13, 1904
June 1904 to January 1907

Baptemes, Paroisse ou Mission de Saint Albert: Jan. 12, 1907 to Dec. 23, 1908.

Parish Register for Lac Ste. Anne:

1844-1859
1845-1851
1902-1916.

APPENDIX I

APPLICATION FORM FOR NWHB SCRIP

Public Archives of Canada
Department of the Interior Records
RG 15 Vol. 171

Declaration by Nancy Besson wife of Peter Jones

Concerning her *Claim*

to participate in any grant to Half-Breeds living in the North-West Territories. as a half breed Child

1. What is your name and P. O. Address? Fort McLeod P.O.

2. Where and when were you born? at Edmonton, in 1861.

3. What was the name of your father? Baptiste Besson

4. What was the name of your mother? Rosalie Bruneau

5. Was your father a Half-breed or Indian or either? Halfbreed

6. Was your mother a Half-breed or Indian or either? Do

7. Where were you living each year since you were born? I lived in the N.W. Terr. ever since I was born (in 1861), in Edmonton, in Porcupine Hills in the other side of the lines in U.S. from 1878 to 1883, I am now here at McLeod since 1883 to this day —

8. What has been your occupation? I am the wife of a plain hunter & farmer now.

9. If married when, where and to whom? in 1874, at Edmonton, to Peter Jones

10. How many children have you living? three

11. Give their names, and dates of birth? John, aged 7 years, Marie aged 5 years James aged 3 years —

12. What was the name of their respective (mothers or fathers as the case may be) Myself & Peter Jones

13. How many children had you who died? ✓

14. Give dates of birth and death of those who died? ✓

Form No. 142.

15. Can you produce baptismal certificates of the birth of your children? If so, produce them, if not, state reasons? ✓

16. Of those dead can you produce burial certificates? If so, please produce them, if not, state why not. ✓

17. Have you ever had a homestead entry? never

18. If so, what became of it? ✓

19. Have you ever had any land claims in Manitoba or the North-West? If so, state nature of them, when and how acquired and, what disposal did you make of them? never

20. What do you consider the value of all your property, land, implements, building, horses, cattle, &c.? none

21. Did you ever receive land or scrip in Manitoba in commutation of the Half-Breed rights? never

22. Mention any names by which you have been called, other than your name given above? none

23. Do you receive any annuity as an Indian, or in any way participate in grants to Indians? never

24. State anything bearing on your claim that you may wish

I want a Scrip for $240.00 rather than 240 acres of land —

Nancy her X mark Besson now wife of Peter Jones

I, Nancy Besson wife Peter Jones within named, make oath (~~or declare~~) and say that the within answers given by me are true in every particular. So help me God.

N.B. 285.

Sworn (~~or declared~~) before me, at Fort McLeod this 18th day of May A.D., 1885 having been first read over and explained in the Cree language to the deponent, who seemed perfectly to understand the same, and in my presence. made her mark thereto

Nancy her X mark Besson wife Peter Jones

R Goulet
Commr

I, Francois Deschampes of Fort McLeod make oath (~~or declare~~) and say that I know Nancy Besson, who has made oath to the correctness of the within answers, and so far ~~as his answers to questions numbered are concerned, I know them to be correct, and so far as the remainder are concerned,~~ I believe them to be true and correct in every particular.

Sworn (~~or declared~~) before me, at Fort McLeod this 18th day of May A.D., 1885 having been first read over and explained in the French language to the deponent, who seemed perfectly to understand the same, and in my presence. made his mark thereto

Francois his X mark Deschampes

R Goulet
Commr

I, David Sinclair of Fort McLeod make oath (~~or declare~~) and say that I know Nancy Besson, who has made oath to the correctness of the within answers, and so far ~~as his answers to questions numbered are concerned, I know them to be correct, and so far as the remainder are concerned,~~ I believe them to be true and correct in every particular.

Sworn (~~or declared~~) before me, at Fort McLeod this 18th day of May A.D., 1885 having been first read over and explained in the French language to the deponent, who seemed perfectly to understand the same, and in my presence. made his mark thereto

David his X mark Sinclair

√

R Goulet

APPENDIX II

APPLICATION FORM FOR DISCHARGE FROM TREATY

Public Archives of Canada
Department of Indian Affairs Records, Black Series
RG 10 Vol. 3906

INDIAN COMMISSIONER'S OFFICE
AUG 2 1893
N.W.T.

DEP[illegible] 1893

202

105002

To the Commissioner of Indian Affairs for Manitoba and the North-West Territories.

I, Michel Cardinal *a Half-breed, admitted into the Treaty with the* Lake St Anne *Band of Indians, and paid as No.* 73 *desire to withdraw from the said Treaty, under the provisions of Section thirteen of "The Indian Act, 1888" as amended, and hereby signify my intention of so doing by signing this application in the presence of two witnesses this* 29th *day of* July *A.D. 189*3

Witnesses—

Geo W Gairdner
Alexandre his x mark Cardinal

Michel his x mark Cardinal

We, George W. Gairdner *and* Alexandre Cardinal *of* Saint Albert *do hereby certify that the above application is made by* Michel Cardinal *who is a Half-breed, to withdraw from Treaty, was signed by the said* Michel Cardinal *in our presence, and that we are the subscribing witnesses thereto.*

Sworn before me at St Albert
this 29th *day of* July
*A.D. 189*3
H W McKenney J.P.
A Justice of the Peace in and for the North West Territories of Canada

~~J Michel~~
Geo W Gairdner
Alexandre his x mark Cardinal

Form No. 81

105002

Full answers are required to the following questions by applicants for discharge from Treaty.

Applicant's Name Michel Cardinal

Date and Place of Birth 1832 at Jasper House

Father's Name Antoine Cardinal

His Nationality Half Breed

Mother's Name Marie

Her Nationality Chicane Indian

Band to which applicant belongs Lake St Anne

Number of Ticket 73.

Years for which applicant has drawn Treaty money, stating where paid each year 1888, 1889 1890 all at Lake St Anne, as per Treaty ticket

If Married, to whom, and when Marie Wainyaude in 1857.

Names and date of Birth of all applicant's living children, if any La Louise 1862. Therese 1864, Josephine 1866, Joseph 1873, Marie 1875, Elise 1877, Justine 1879.

Names and date of Birth and Death of all applicant's deceased children, if any

Felix 1860 } Michel 1869.
died 1880 } died 1889

Present place of residence Jasper House.

Means of Support Hunting.

I, Michel Cardinal *do solemnly declare—*

That I am the applicant for discharge from Treaty whose name is mentioned in the answers to the foregoing questions.

That the said answers are true; and I make this solemn declaration conscientiously believing the same to be true, and by virtue of the "Act respecting extra-judicial Oaths."

Declared before me at Saint Albert *this* 29th *day of* July *A.D. 189*3
H W McKenney
J.P.

his
Michel + Cardinal
mark.

George W Gairdner *of* Saint Albert
and Alexandre Cardinal *of* Saint Albert
do solemnly declare—

That we personally know Michel Cardinal *whose names are subscribed to the above declaration.*

That to the best of our knowledge and belief the answers given to the foregoing questions, the same having been read over to us, are true and correct in every particular.

And we make this declaration conscientiously believing the same to be true, and by virtue of the "Act respecting extra-judicial Oaths."

Declared before me at Saint Albert *this* 29th *day of* July *A.D. 189*3
H W McKenney
J.P.

Geo W Gairdner
his
Alexandre + Cardinal
mark.

APPENDIX III

DATA FORMAT FOR NWHB SCRIP APPLICATIONS

Each application was treated as a separate case. Three cards were required for each application by a single person, and a minimum of four cards were required for an application by a married person. Each card in a set has the same sequence of field lengths to facilitate keypunching and sorting. The first three fields on each card are entered as alphabetic characters, the last six are entered as numbers. Names, and initially geographic localities and Treaty bands, were entered in alphabetic mode using abbreviations where necessary to fit the allotted field size. Dates and quantitites were entered in numeric mode and localities and Treaty band designations were subsequently given number codes as well.

Special coding forms were used only when index entries were presented in a confusing fashion. Otherwise all keypunching was done from a modified photocopy of the original typed index. The thirty-six fields of information entered are described below. The numbers in brackets represent the space allotted to each field on a standard computer card.

EGO CARD

1. (1-15) Given name(s) of ego.
2. (16-41) Surname of ego.
3. (42-57) Last address for ego. If ego deceased this would be location of death.
4. (59-62) Year of birth for ego.

5. (64-65) Month of birth for ego. Sometimes season, rather than month was given. Months and seasons were coded by number, viz:

1	January	9	September
2	February	10	October
3	March	11	November
4	April	12	December
5	May	13	Fall
6	June	14	Winter
7	July	15	Spring
8	August	16	Summer

6. (67-68) Day of birth for ego.

7. (70-71) Number of offspring alive.

8. (73-78) Six digit identification number. The first four digits identify the nuclear family to which ego belongs. These numbers were assigned in sequence beginning with 0001 as new nuclear families appeared in the index. The last family identification number assigned was 5,148, however, a few numbers were dropped in the course of making the corrections described below. It was not possible to indicate links between related nuclear families by this numbering system. Although families with the same surname may have adjacent indentification numbers, this does not always hold true, as the NWHB index is broken into two separately alphabetized lists. The first list represents the 1885 commission, and the second list represents the 1886 and subsequent commissions. Therefore, if members of related families applied for scrip in different years they might be assigned family identification numbers which are very far apart.

The last two digits of the six digit number represent sex of the applicant (ego) and his/her marital status or birth order. All married males are coded 01, married females are coded 02, and their offspring are coded 03, 04, 05, etc., in ascending order of birth, the odd numbers representing male children and the even numbers representing female children. Exceptions to this numbering system occur when the female is a second or subsequent wife, in which case she is numbered 04, 06, etc., and when it was not possible to predict the correct birth order of children because of the organization of the original data. If the sex of an individual could not be determined because there was no given name, or the gender of the name given was unclear, the last two spaces were coded 00.

The paternal bias which this method of assigning identification numbers implies already existed in the raw data. Married females and even commonlaw wives took their male mate's surnames with few exceptions. This may well reflect European acculturative influences.

9. (80) Card sequence number. The ego card is number 1.

FATHER CARD

10. (1-15) Given name(s) of ego's father.
11. (16-41) Surname of ego's father.
12. (42-57) Location of ego's birth.
13. (59-62) Year of ego's death, if applicable.
14. (64-65) Month of ego's death. See codes under number 5 above.
15. (67-68) Day of ego's death.
16. (70-71) Number of adopted children.
17. (73-78) Identification number. See number 8.
18. (80) Card sequence number. The father card is number 2.

MOTHER CARD

19. (1-15) Given name(s) of ego's mother.
20. (16-41) Maiden name of ego's mother.

21. (42-47) Band of membership, that is, the name of the band to which ego belonged if he/she was ever in Treaty. To receive scrip, of course, it would be necessary to obtain a discharge from Treaty. The main value of including this information would be in cross referencing the present data with Indian Affairs data.

22. (59-62) Number of Half Breed scrip application. The main value of including this information is that it makes it possible to follow the fate of the claim in other documents which are available at the Public Archives of Canada.

23. (64-65) Status of ego's father. The following codes were used to indicate status.

00	Unknown
10	Halfbreed
11	Indian
12	Iroquois
13	Swampy Indian
14	Saulteaux ("Saulteuse")
15	Blackfoot, Peigan, Blood
16	Cree
17	Sioux
18	Stoney (Assiniboine)
19	Other (Snake, Chipewyan)
20	White
21	English
22	French Canadian, Canadian
23	Irish
24	Scot
25	French
26	Norwegian
27	Orkney
28	American
29	Other (German)

24. (67-68) Status of ego's mother. Coded as under number 23.

25. (70-71) Number of offspring deceased.

26. (73-78) Identification number. See number 8 above.

27. (80) Card sequence number. The mother card is number 3.

SPOUSE CARD

For present purposes individuals who were living commonlaw were not differentiated from married individuals.

28. (1-15) Given name(s) of spouse of ego.

29. (16-41) Surname of spouse of ego (maiden name if female).

30. (42-57) Location of marriage.

31. (59-62) Year of marriage.

32. (64-65) Month of marriage. See codes under number 5.

33. (67-68) Day of marriage.

34. (70-71) Further information regarding offspring. Coded as follows:

0 Children's names available
1 Children's names and birth/death dates available.

In some cases names and even birth/death dates of offspring are included in the index entry for the parent(s). For the 1885 index the author punched cards for the children so identified. For the post-1885 index it will be necessary to consult the original copy of the index, or even the original applications at the Public Archives of Canada, in order to acquire the actual information. An effort was made while working at the Public Archives of Canada in Ottawa to record such information from original applications relating to people belonging to the study population in west-central Alberta identified through field and archival research, and this information is on hand.

35. (73-78) Identification number. See number 8.

36. (80) Card sequence number. The first spouse card is number 4.

SUBSEQUENT MARRIAGES

As many cards as necessary were added to cover additional marriages. They were given sequence numbers 5, 6, 7, etc. Where possible, information for field 34 relates to the specific marriage described on the same card. Most often, however, it was not possible to distinguish the specific marriages from which the offspring came on the basis of available data, and the code, therefore, usually relates to the results of all of ego's marriages.

RECODING OF LOCALITIES

To facilitate migration analysis geographical locality fields were subsequently changed to number codes and latitude and longitude designations in degrees and minutes. A list of 2,286 unique localities from the entire data set, and the frequency with which each locality occurred, was derived using the computer. This list was reduced to approximately 900 by grouping cases which represented the same location but were read separately because of spelling variation, or by grouping instances of old and new names for one locality which appeared in the applications.

For approximately 11% of the localities a precise latitute and longitude could not be assigned. There were three reasons for this problem: (1) the locality reference was non-specific, for example, "plains," "N.W.T.," "Manitoba," etc.; (2) two localities were cited for one field, for example, a birthplace might be given as "St. Albert or Edmonton," "Winnipeg or Calgary;" (3) the place named no longer exists and its former location has not yet been identified.

The latter two categories and most of the first were coded as "-99 00 -99 00" but given unique identification numbers. Similar designations, for example, "plains" and "prairies" were grouped under one number. In a few cases a precise latitude and longitude were given for a non-specific locality. "Montana" was coded as the center of the state as that area was, in fact, heavily populated by Metis people. Localities given as the Rocky Mountains were represented by coordinates given in gazetteers for the center of the North American chain as these fall in an area which was used by native peoples who participated in scrip commissions. Similar averaging was done for localities on other continents: Africa, the Orkney Islands, Scotland and England were each designated by coordinates at the center of their political boundaries.

Africa represents a further complication as it is east of Greenwich meridian while all other locations in the present study are west. Fortunately, it does not appear as a locality in the subset of data to be used in initial migration analyses (matched spouses) but if it occurs in subsequent analyses of the NWHB data special compensation will have to be made. In the first subset of data to be analyzed also, the proportion of localities which cannot be designated by map coordinates drops to 2% by frequency count.

Where locations given by applicants were creeks, rivers, lakes, or bays an attempt was made to give coordinates for a point on or along the geographical feature known to be an area of settlement. In this regard, coordinates for extant Indian reserves were taken as designations on the assumption that these areas represented a focus of population concentration and/or use at the time of Treaties and Half Breed commissions in the late nineteenth century.

A final difficulty faced in coding localities arose because several locations throughout western Canada and the United States were known by the same name at the time of the Half Breed commissions, for example: Battle River, Beaver Lake, Devil's Lake, Egg Lake, Fort Assiniboine, Grand Rapids, Long Lake, Pelican Lake, Pembina River, Pidgeon Lake, St. Joe, St. John(s), St. Laurent, St. Paul, St. Peter, Trout Lake, Whitefish Lake, White Mud Creek, White Mud River, White Mud Lake. Attempts were made to identify the specific area concerned using various approaches:

1. Historical sources--old maps, local histories, old post office lists--were consulted to determine which of the locations known by the same name were centers of Halfbreed populations, and/or which locations were actually occupied at the time of the Half Breed commissions. Annual reports of the Department of the Interior were also consulted as these listed the locations which the commissioners visited and might therefore give clues to the most likely region in which a place was located.

2. A printout was obtained listing all cases in which the place name under question occurred. On the basis of this list the locality of the place named was selected as being in the region most closely associated with the other localities mentioned, or the choice between possible alternatives was made on the basis of where relatives were settled.

Any errors resulting from applying these criteria to choose between alternative locations for a given place name will bias the final analysis of migration toward short range, rather than longer range patterns.